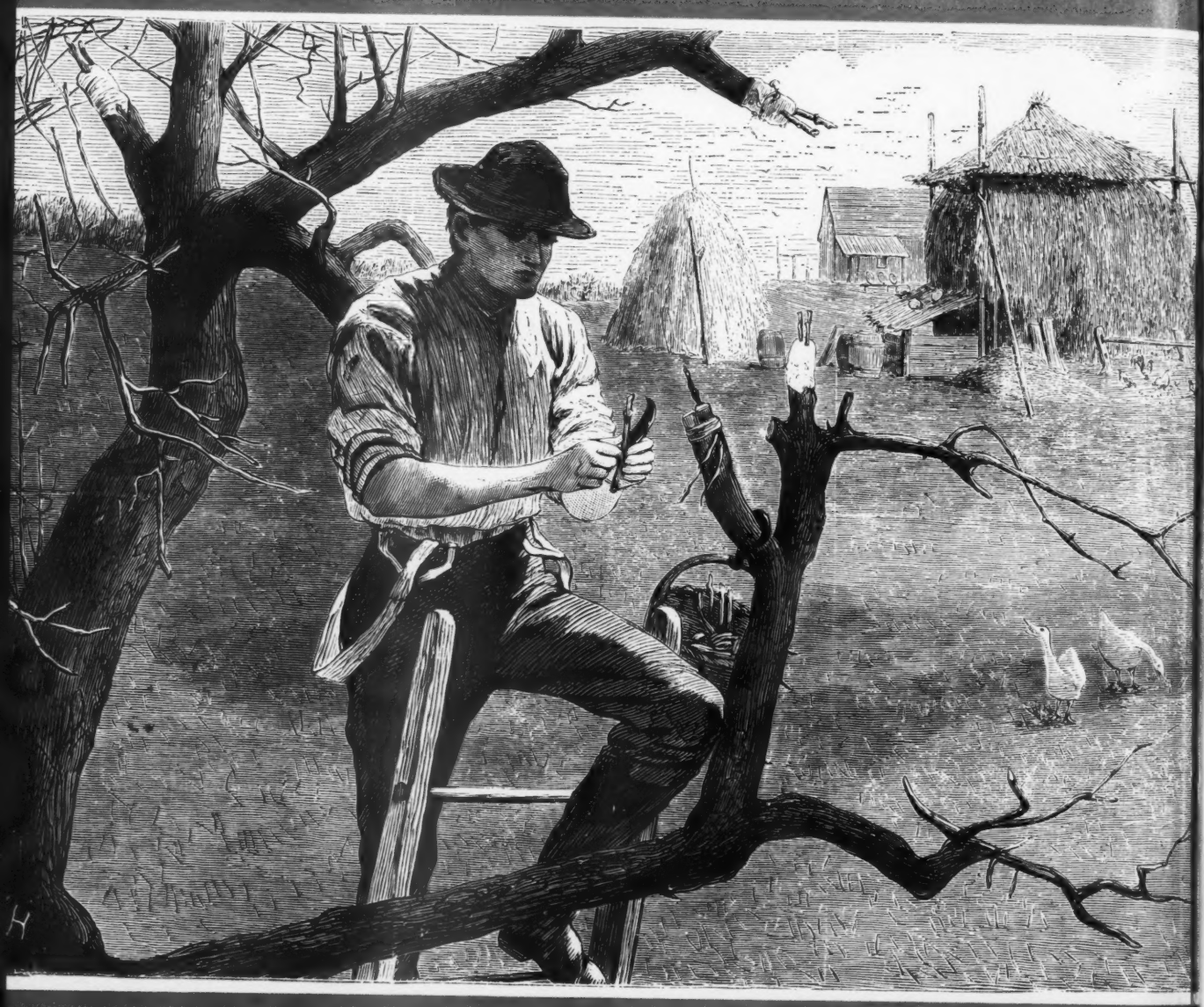
The New York State
Conservationist
State of New York Conservation Department
April-May 1956

The Cycle of Forest Life *(See page 2.)*



Spring Work on the Farm, by Winslow Homer
(see page 12)

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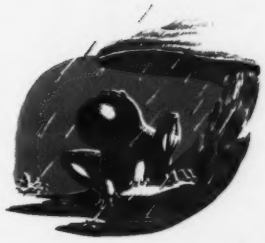

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Now it's *our* turn

The clouds of this long and bitter Winter have had a silver lining; they have given us both the time and the inclination to brood up a counter-attack upon our subscribers. We launch it now.

For ten years—ever since we started publication—our subscribers have been bombarding us with questions that only the Almighty could answer. Our subscribers have known this, and sitting back and smiling smugly have taken great pleasure in our embarrassment. Now we strike back. Our resentment at such treatment has now flowered and borne a poisoned fruit, and we have come up with a plan for massive retaliation at times and places and with weapons of our own choosing. The choosing has been done: The time is now, the place is page 8, and the weapon is a quiz about the Forest Preserve which if anybody passes it we won't believe it.

And, Dear Subscriber, the end is not yet. This is only our *first* counter-attack, and unless we knock off all of you with this first blow there may be some more nastiness in future issues. We plan to win this war.

The cute little quiz on page 8 is the product of the most deranged minds in the Department. While you mutter that that should include a lot of personnel, we go on to tell you that we invited not only the people in the Albany office to get into the act, but also a lot of our field men. The response was extremely satisfactory. Really mean questions—just the kind we wanted—poured in from all over the State. (No matter what you think about the Conservation Department, you've got to admit that we stick together when faced by a common enemy.) Anyway, the conspiracy against our subscribers bloomed beautifully.

We had one problem though. The questions submitted were wicked and wonderful, but we had also undertaken to publish the answers. What about the answers? A member of our Bureau of Forest Pest Control (which Bureau believes that our subscribers come under its jurisdiction) submitted a lovely question, but we're still waiting to hear from the Attorney General's office what the answer is. So we had to leave this one out. But we've included plenty that we hope will give you a lot of trouble.

On the serious side: Our Forest Preserve is unquestionably one of our most valuable possessions. How much do we know about it?—Editor

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The Cycle of [illegible]

by Dr. Babette Brown Coleman

IN the painting which appears on the cover of this issue, the artist has captured a moment of time and a small unit of space in the life of a forest. Such moments, such units of space, are neither rare nor isolated. Rather, they are typical of what may be encountered by anyone who studies closely the laws of biological succession which govern the life and death of plants and animals almost anywhere, any time.

Before you is an ancient boulder. From its surface a sturdy hemlock raises its trunk into the light. Through the filigree of its branches warm sunlight sifts down to the rock below. Here the tree roots embrace the hard material in their growth downward, a response to the force of gravity which extends them into the soil, the source of all-important water. Forcing their way through a crack in the rock, the roots may widen the crack and reach the soil, perhaps only to have the soil washed away by a Spring storm. But their struggle continues.

One root is a ramp up which a gliding snail, possibly in search of succulent leaves, is wending his way, unabashed by the attention of a lively nuthatch. The bird, spying him, has paused for an instant in his busy search for insect pupae among the fissures of the hemlock bark. Bright in the filtered sunlight are the dainty plumes of Canada mayflower. The fine rhizomes—the root-like stems—of these plants creep through the soil ingredients which have accumulated in a crevice of the boulder. In the dust and duff that have gathered around the base of the tree with its radiating root system, polypody fern rhizomes extend their decorative leaves, no doubt a veritable jungle where tiny insects hide. And the four white bracts around the cluster of bunchberry flowers advertise that pollinating time has come: *"Insect visitors welcome!"*

Like the masked bandit of a melodrama, a wood frog has found a comfortable cushion of lichens on which to wait in ambush for his unsuspecting prey. Close by, a butterfly pauses momentarily in a patch of sunlight on a tuft of moss. The rock surface is covered with other lichen growths, gray and yellow-green in color, while more picturesque members of this clan, resembling crumbled gray flakes, send silvery goblets a centimeter or two into the air or extend irregular, red-topped branches that look like kitchen match heads above the surface of the rock. Each crack and crevice in the boulder supports some forest denizen visible to the eye, and doubtless dozens of unseen creatures and plants.

Briefly pausing to devour an acorn recently retrieved from its Winter hiding place, a nimble chipmunk disturbs the quiet of the scene. His meal proceeds as he stands on a decaying log, already invaded by lichens and supporting a seedling hemlock. Colorful decorations for his humble board arise from the forest floor—a clump of wintergreen with pendent, bell-shaped flowers, and a spectacular moccasin flower.

You cannot fail to feel delight in such excellent company. "The cycle of life," you say to yourself "I see each living thing—the boulder, the decaying log, the

mature tree, the tiny seedling. Everything I see is somehow related, is part of the whole of which I, too, am a part—but a part with some strange ability to inquire, to search and to comprehend to a small degree at least the significance of the other parts and my relationship to them."

The boulder before your eyes is a glacial erratic, perhaps, carried from some distant area in the Northeast and deposited in its present location by a great ice sheet. It lies among other drift from the glacier. When the ice melted and the waters drained away it was exposed to all the natural forces and agents which could operate to change it. Rain beats upon it. Strong winds blow, carrying finer rock particles and dust from the adjacent till which grind against the surface of the boulder and begin to carve out small fissures. Snow falls upon it, and when it melts the snow water collects in tiny depressions and pockets. Then the temperature falls and the drop of water in the pocket becomes a block of ice which expands and finally causes the rock surface to chip. The crevice deepens and fine, crumbled rock particles come to lie in it, the first inorganic components of a future soil.

A sparrow stops to rest on the rock. Clinging to its scaly toe is a bit of lichen "dust," inadvertently picked up at a previous stop on a lichen-covered rock. A few of these grains are knocked off as the bird hops about on the rock. They cling to the surface. Additional lichen grains or "soredia" arrive with a fresh breeze, and so do propagative cells of blue-green algae. Thus, without any fanfare or excitement, the rock has been invaded.

But can the lowly invaders survive the dry, inhospitable conditions of the rock? Only time will tell. They secure their position as they absorb moisture when it rains or snows. Or they may dry up in droughts, perhaps recovering when moisture returns, but perhaps not. They may live and grow, spreading out across the rock surface, and at least some of them producing acids which aid in dissolving still more of the inorganic components of the rock, initiating the erosion of new crevices and the accumulation in depressions of more inorganic particles. But some of the invaders die. Their organic remains, however, drop or are blown into the tiny gullies in the boulder, where they mingle with the fine rock granules already present and generate a true soil.

Birds, insects, other creatures and wind —all may bring moss spores to the rock. Microscopic cells like these lodge in or on the moist new soil in a crevice, and quickly germinate in a situation as ideal as this. In time, leafy moss shoots rise erectly in the crevice and peep out above it; or prostrate shoots creep through a crevice and begin to climb over its edges and across the rock surface.

AN incredibly long time has been involved in this invasion. While one stage of it succeeds another in a certain place on the boulder, the initial stage may be just under way in many other spots. Eventually it becomes clear that the plants are taking over; they are succeeding: More of the rock surface is being attacked all the time, new crevices are being formed, the older ones are deepening, more soil is accumulating in them, and death of the initial invaders serves to improve the conditions for those which follow.

By such slow processes and unspectacular attacks the rock is worn down; it gradually crumbles during the slow but persistent onslaught of the living plants and the natural agents of erosion—water, ice and wind. At each stage of its breakdown, more soil is synthesized and more water can be retained in it. Such soils —composed of inorganic particles of the boulder and the organic matter of organisms that have lived, grown and died on its surface—become increasingly capable of supporting still other kinds of plants.

Tall plants like trees will not be the first to succeed. The first successful woody plants are usually small shrubby ones (like blueberries) which can tolerate hot sun. Their seedlings grow, leaf out, flower and fruit. They gain a foothold in the soil-filled crevices, and with the building up of soil on the surface they will grow there, too. Areas shaded by their leaves are hospitable to seeds of conifers and other trees. Winged seeds of the former lodge in such places, and from them sprout the seedlings which, protected by the blueberries in their tender years, soon outstrip and overtop their one time protectors.

Ever so slowly, the forest stage in the invasion of the boulder appears. Under the dominant trees, other members of the community find their places—perhaps a shadbush and an azalea in the understory, and in succeeding lower layers the ferns, painted trillium, twisted stalk, *Clintonia* — with wintergreen and partridgeberry carpeting the floor. Each member lives where moisture, soil and light conditions are appropriate for its kind.

Animals follow the plants. They find their niches amongst them at that particular stage in forest development when the proper habitat, food and shelter are provided. The snail, the chipmunk, the frog—none of them would be there if an environment to their liking had not been provided by plants.

THE painting reproduced here suggests an eternal process; essentially, what is happening in this painting is happening many places, all the time. Not dramatically, nor on a grandiose scale, but certainly, steadily and surely. We must recognize this if we are to understand the physical and biological principles on which conservation is based.

The rainbow run is on: Opening Day, Catherine Creek, 1947

Movements of

Trout and Salmon

WITH the early Spring high water, as most anglers know, the rainbows will be running up many of the tributaries of the Finger Lakes and of certain other large waters. Such mass movements of fish excite considerable interest and curiosity, and although the rainbow is one of our more spectacular migrants his wanderlust is not peculiar to his tribe. Probably all of the many salmonoids, the trouts and salmons, have some degree of migratory behavior.

Movement is a very important aspect of fish life. To be in the right place at the right time for feeding, to escape from danger, and to reach spawning grounds for successful reproduction—such movements count for much in the timeless battle for survival which our existing fish populations have succeeded in winning.

Some understanding of fish movement is also important to success in angling. If our game fish knew this, and endeavored to throw up a smoke screen to hide their wanderings, it is difficult to see how they could do much better than nature has already done in their behalf. It is usually very difficult for humans to find out what is happening beneath the surface of the water. We do know, however, that the movement of trout and salmon starts from very humble beginnings. As anyone who visits a fish hatchery can see when the eggs are hatching, the sac fry at emergence from the egg are sluggish fellows. In the natural protection of the gravel spawning areas they are not even to be seen at all, for they are hiders, not swimmers. In the hatchery trays they remain motionless until disturbed, when they wriggle rapidly for a short time and then quiet down.

Soon the yolk sac is absored, or nearly so, and the fry begin to move and to feed. Under wild conditions very small fry may be seen actively moving to inspect any tiny particle the water may bring.

Even though the fry of all salmonoids are much alike in general appearance, the different species have slightly different behavior reactions. The brown trout and the Atlantic salmon are bottom feeders for a long time, but the brook, rainbow and lake trout soon "swim up" (as the hatchery men put it). If you are fishing a large stream in April, perhaps miles below any brook trout spawning grounds, you may find an occasional brook trout fry along the edge of the water. Sometimes these little fellows can be watched dropping downstream tail first and some of them cover long distances. Although a wandering type of movement is easiest to observe in the case of brook trout fry, there is reason to conclude that all young salmonoids tend to scatter and occupy all available feeding areas. Even landlocked salmon, when fry slightly over an inch long, will move many yards from the gravel nest or redd from which they hatched. But they scatter cautiously, and remain on the bottom.

The behavior of *Salmo salar* (as the Atlantic salmon and its landlocked forms are known) affords an interesting contrast of non-migratory behavior, according to the particular stage of development which you may choose to consider. Salmon "parr," as the fingerlings are called, seem to dislike leaving home and they remain in the spawning streams for over a year, often up to three years. Planted "parr" have similar reactions. But, when about five to six inches long in late Spring, the "parr" gradually change into "smolts." In appearance this means a conspicuous silvering up of the scales, the red spots becoming obscured and the pectoral fins becoming dusky rather than yellowish. As has been found in several histological studies in both salmon and the comparable "smolt" stage of steelhead (rainbow) trout, the changes are more than skin deep, and the structure of the thyroid gland reflects some of them. Growth rate speeds up, and along with this comes an urge to move to more spacious waters. By Summer the smolts all depart and scatter in lake or ocean and, as immature salmon, range widely in search of appropriate food, including forage fish. Most of them will spend two years as juvenile salmon before seeking spawning streams. The return to spawning areas may begin early —in some rivers, in June, while in others, salmon may delay upstream migration until early Fall when nearly ready to spawn.

Many of the other salmonoids have failed to evolve as intricate a migratory routine as this. The lake trout, as its name indicates, is usually a lake fish. Occasionally a few will come up streams in Spring, our best New York example being the Schroon River (inlet to Schroon Lake), but mostly the laker spends his entire lifetime in one body of water even though ranging widely if the lake is large. Some populations of brooks, browns and rainbows live a rather localized life within a single stream, pond or lake. Other populations, however, have evolved a highly migratory behavior very similar to that of *Salmo salar*.

Brooks, browns and rainbows all are capable of developing behavior patterns of this type within certain geographic or physiological races. From this fact arises much confusion, for an angler accustomed to catching such fish in their more conventional sizes and colors is not prepared to accept the silvery coloration which these fish develop when they attain stages comparable to salmon "smolts." Within our New York waters are to be found both resident rainbows (which breed without this process of turning silvery) and migratory "steelhead" rainbows, which become as shiny as a new dime before dropping downstream into our larger lakes. In a few waters, also, we have brown trout which become silvery and resemble salmon. As to the brook trout, the most highly migratory races are to be found in eastern Canada, where they are known as sea-trout, but in Cranberry Lake (St. Lawrence County) there are brook trout which are very migratory in behavior, although not

showing as silvery a coloration as the true sea-run brookies.

The heriditary basis of migratory behavior is considered to be very important. Even though all trout or salmon of any given species look alike in those morphological (structural) characteristics used for purposes of classification into species, there are innumerable populations widely separated from each other, many of these differing sufficiently to be called separate "races." So, if we attempt to understand why trout and salmon move around as they do (or don't, as the case may be), it is necessary to give heredity considerable weight. That it does not account for *everything* is quite evident, however; consider the very marked seasonal differences in migratory behavior among the same local populations of fish over a period of years.

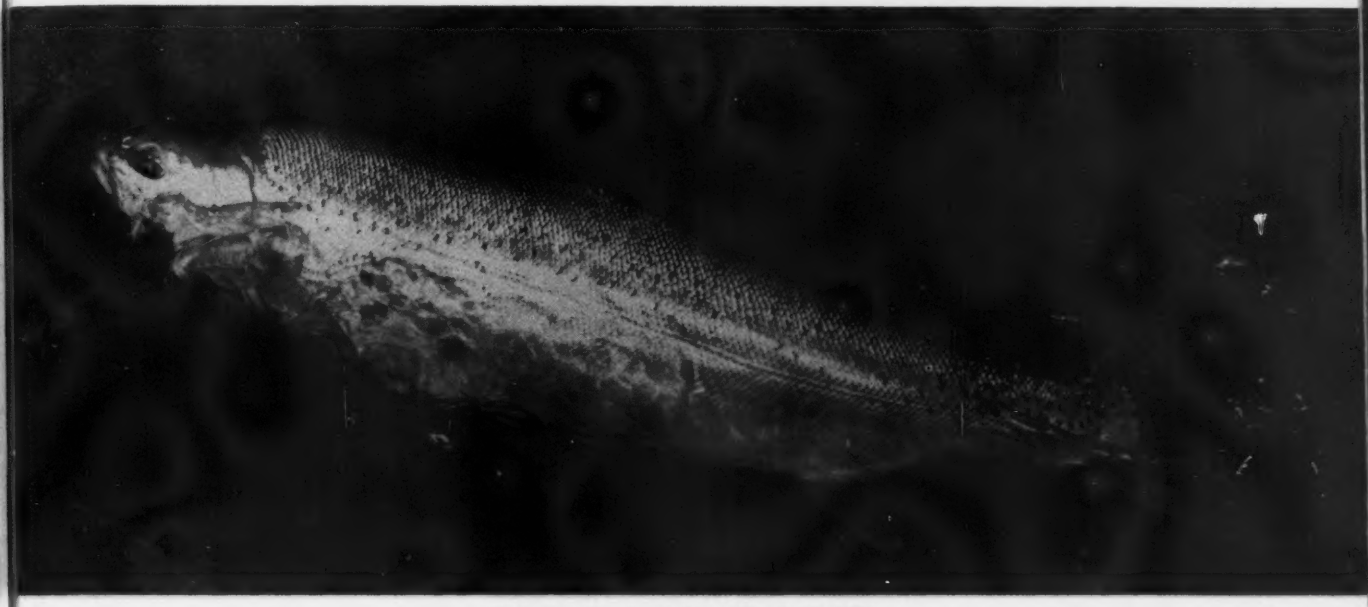
An experienced rainbow angler in the Finger Lakes, for example, will encounter seasons when the rainbows run in April, just right for fishing, other seasons when the run is mostly too early, and perhaps still others when the run is unexpectedly poor. There is reason to conclude that stream flow and temperature are important factors in causing such variations. We must assume that fish are unable to read maps to see where the tributaries are, and that they have to use their physical senses such as smell, feeling, or memory. A study carried on in Skaneateles Lake some years ago indicated a poor rainbow run into the principal inlet, Grout Brook, when the stream was low and cold. Winter thaws or Spring rains tend to attract rainbows into inlets, and in several instances even Fall runs have been observed. Canadian experiments show that artificial freshets are effective in bringing Atlantic salmon into streams, and seem to support the general conclusion that a lot of flowing water, at the right temperature, can stimulate fish to run.

To proceed to another factor influencing movement, a good case can be made for temperature alone as a factor in affecting trout or salmon movements—not only spawning migrations, but also movements at other times of year. Lake trout anglers know very well that during the Summer the trout are deep down in the cold water, but that in the Spring months the fish may be widely scattered, sometimes at the surface or in the shallows. During early Spring there are at times very slight differences in temperature anywhere in the lake, and times when the inshore water is warmest. Landlocked salmon, lovers of warmth up to a certain point, are often caught around the edges of lakes or off stream mouths in early Spring before the main body of the lake is even clear of ice.

Temperature differences may help guide our trout or salmon, but we must remember too that these fish are not mere automatons without brain or senses. They have good eyes and a very keen sense of odor or taste perception. In particular, a number of studies on Pacific salmons indicate an extremely sensitive perception of certain odors, and it is believed that this may enable these fish to recognize the special waters of particular rivers. In any case, it is well-known that these salmon show a remarkable homing or "parent strain" behavior.

Experience with our own salmonoid species indicates that they are, fortunately, not 100 per cent addicted to "parent stream" behavior. The rainbow and brown, two introduced species which have multiplied well, have spread out widely from the initial introductions. Hence, some individuals must have had enough pioneer initiative to start looking for spawning areas other than original home bases. In several instances Atlantic salmon and rainbows, planted well offshore in lakes, have run up streams. Such individuals obviously had never been there before; perhaps they just preferred stream conditions to life in a lake.

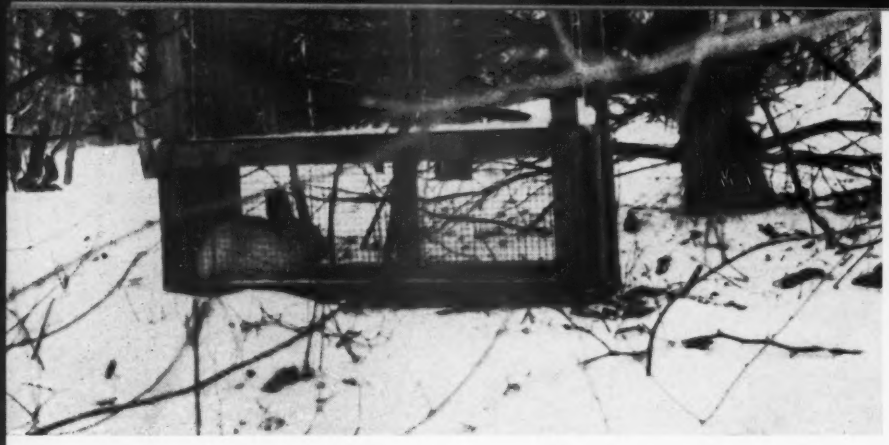
A considerable amount of tagging experience has resulted in incidents, here and there, which indicate a well developed "homing instinct" of certain fishes comparable to that of certain birds. For example, several male landlocked salmon taken on the Schroon River spawning grounds and stripped of milt for fertilizing eggs were liberated in Schroon Lake; they quickly ascended the river again, and were recaptured near where they were first netted.



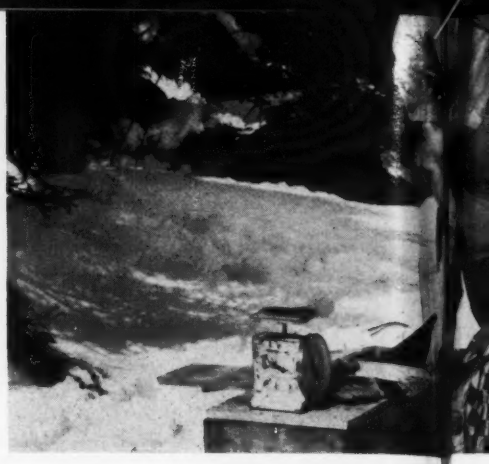
Catharine Creek rainbow, March 23, 1956

TOO much is known about the "how" of trout and salmon movement even to attempt to sum it up here. On the other hand, too *little* is known about the "why" of such migrations to clear up the many mysteries involved. All of which leads us to conclude that the *wandering* of fish is a subject that is likely to keep us *wondering* for a long, long time.

—JOHN R. GREELEY,
Chief Aquatic Biologist



1. Snowshoe hares are trapped from refuges and areas inaccessible to hunters for transfer to localities where the habitat has reached a stage suitable for them.



2. Hares are sexed, aged, weighed and ear-tagged before release to new homes

4. Several square miles of upland coniferous (preferably spruce) multi-aged plantations, or similar cover, are necessary to sustain a huntable hare population. Optimum elevation in N. Y., about 2,000 feet.

6. Below, a transferred hare sizes up its new surroundings before heading for cover

New Homes f

THE attempt to re-establish the long absent snowshoe hare in sections of the State wherever suitable, unoccupied environment can be found, received another boost this past Winter. One-hundred fifty-six hares were live-trapped from areas closed or inaccessible to hunters and transferred for release via snowmobile, truck, jeep, and/or toboggan to areas which meet a critical set of cover requirements with regard to size, composition and location. These limitations are based on the results of pilot stocking experiments undertaken in areas of various size and composition during the past twelve years.

The most promising liberation areas are found in the upland sections of the Southern Tier and mid-State regions where abandoned farm lands have been, and are being, extensively reforested. These multi-aged conifer plantations are proving to be ideal hare environment, especially where spruce is a prominent species. Whereas in their early life these plantation areas afford excellent habitat for cottontail rabbits, the latter are farm game and do not thrive in mature wood-

3. A snowmobile is used to move equipment in—and trapped hares out—of remote area. Hares are then transferred to trucks for delivery direct to liberation areas.

for Hares

lands. The objective is to replace the outgoing cottontails with a woodland animal (the hare) which will find the changing environment to its liking. Such a replacement would occur naturally where cottontail and hare ranges overlap. In this case there no longer are any native hares in the localities to take over —hence the need for stocking.

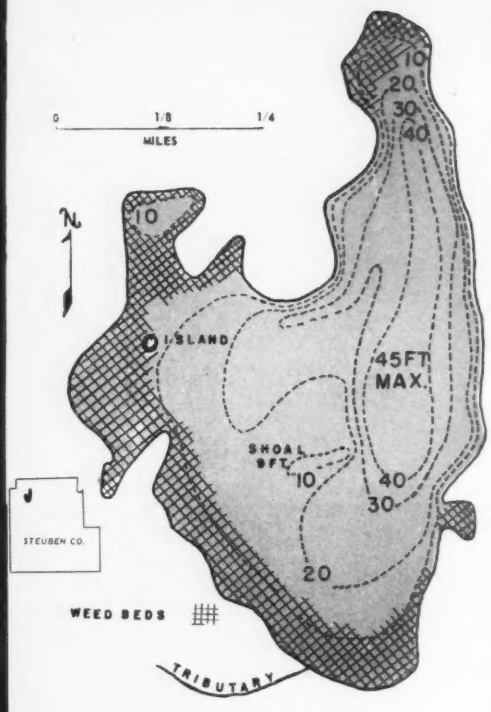
The pictures here are typical of the activities which in the past few years have resulted in the stocking of over 1,200 hares on 34 different areas in 19 counties.

District Game Managers are keeping an eye on the status of past liberations and are filling in the gaps as stock can be obtained. While many of the stocking attempts throughout the State are still in the balance and a few apparently have failed, others definitely have succeeded. In some instances original liberations have prospered sufficiently to be tapped for stocking elsewhere in the districts to speed up the spread. And, in one case, in a county which prior to recent stockings had held no hares for a quarter of a century, serious consideration is being given toward a limited open season within a year or two.

—Joseph Dell,
Game Research Investigator

5. Some hares are toe-clipped before release to permit identification of individuals from their tracks. This permits gathering information on survival, travel and abundance. At right, track of toe-clipped hare showing missing outer left toe-end.

7. Below, tracks of a long absent but welcome "stranger" appear in many sections.



Loon Lake

Location

Northwestern Steuben County

Physical Features

Area: 141 acres
Elevation: 1,696 feet
Maximum depth: 45 feet
Length: about ¾ mile
Maximum width: About ½ mile
Bottom: Muck, limited areas of gravel and rubble

Chemical Characteristics

Water: Relatively soft
pH: Alkaline
Oxygen: Poor below 20 ft. depth

Aquatic Plants

Common to abundant over the muck bottom at depths to 20 feet; mostly pondweeds and the water weed; water lily common in some areas

General

Walleyes stocked
Tip-ups permitted
Boat livery available

Fish

Chain pickerel
Walleye
Smallmouth bass
Yellow perch
Rock bass
Calico bass
Common bullhead
Common sunfish
Lake herring
Chub sucker
Common sucker
Golden shiner
Johnny darter

—U. B. Stone,
Dist. Fisheries Manager

Quiz on the Forest Preserve

If you take this quiz seriously, we suggest you read the questions very carefully; some of them are tricky. And some of them are rather confusing and involved—but then, so is the Forest Preserve. Each question is worth two points. The answers are on page 36, but no fair peeking.

1. The Forest Preserve is defined as consisting of all State-owned lands within the Adirondack and Catskill parks. (*True* or *False*)
2. The Adirondack and Catskill parks include all lands within the respective "Blue Lines." (*True* or *False*)
3. The Forest Preserve is defined by (a) the Constitution; (b) Statute law; (c) Conservation Department regulations. (*a, b, c*)
4. Most of the land area within the Adirondack and Catskill parks is Forest Preserve land. (*True* or *False*)
5. The exterior boundaries of all Forest Preserve lands are plainly marked by painted lines. (*True* or *False*)
6. The total mileage of such boundary lines is approximately: *300, 900, 1,500 5,000*
7. It is permissible for a private landowner, whose property is posted, to deny public access to Forest Preserve lands surrounded by his property. (*True* or *False*)
8. The State is required to pay local taxes, including school taxes, on Forest Preserve lands. (*True* or *False*)
9. Under no circumstances may Forest Preserve lands be posted against hunting and fishing thereon. (*True* or *False*)
10. The Legislature may provide for the use of a certain percentage of the Forest Preserve for the construction and maintenance of reservoirs for municipal water supplies and for canals. (*True* or *False*)
11. The Legislature may similarly provide for the construction and maintenance of reservoirs to regulate the flow of streams. (*True* or *False*)
12. Under no circumstances may standing, living trees be cut on Forest Preserve lands. (*True* or *False*)
13. The percentage of virgin timber on Forest Preserve lands is approximately: *1 to 5%; 10 to 20%; 40 to 50%; 80 to 90%*
14. It is permissible to tent-camp in the Forest Preserve for an indefinite period without obtaining a permit, provided the camp is moved every three days. (*True* or *False*)

15. A camper may build a permanent tent platform on Forest Preserve lands only if the location is approved by the Conservation Department. (*True* or *False*)

16. If a permit is obtained to build such a tent platform, the builder has exclusive rights to its use. (*True* or *False*)

17. It is necessary to obtain a permit before building a campfire on Forest Preserve lands. (*True* or *False*)

18. A camper in the Forest Preserve may cut down any dead tree for fuel. (*True* or *False*)

19. A camper in the Forest Preserve may pitch his tent as close to a source of drinking water as he wishes. (*True* or *False*)

20. It is permissible for a camper to cut live trees under three inches in diameter for use as tent poles. (*True* or *False*)

21. A duly accredited individual or group may lease from the State certain Forest Preserve properties, under certain circumstances, for the erection of a camp. (*True* or *False*)

22. On private lands within the Adirondack and Catskill parks, the branches and tops of softwood trees cut for most purposes must be "limbed" and "top-lopped" down to a diameter of: *1 inch; 2 inches; 3 inches; 5 inches; no limit.*

23. The Conservation Department is required by law to protect from fire only State-owned lands within the Adirondack and Catskill parks. (*True* or *False*)

24. A "Fire Town" is a town where: (a) the Conservation Department is required by law to maintain a forest fire protection system; (b) where forest fire control is the responsibility of the Town Supervisor; (c) where a forest fire protection system is maintained by the Conservation Department because the Department considers it necessary. (*a, b, c*)

25. A "Fire District" consists of an area where (a) the Conservation Department is required by law to maintain a forest fire protection system; (b) where the Department maintains such a system because of a recognized need for it; (c) where Town Supervisors are responsible for forest fire control. (*a, b, c*)

26. Fire Towns are located only in Forest Preserve counties. (*True* or *False*)

27. Not all towns in Forest Preserve counties are Fire Towns. (*True* or *False*)

28. All towns in Forest Preserve counties are either Fire Towns, or are in Fire Districts. (*True* or *False*)

29. The Conservation Department may, by regulation, exclude the public from any Forest Preserve lands when a serious fire hazard exists thereon. (*True* or *False*)

30. The Conservation Department may, by regulation, exclude the public from forests, woodlands and open lands anywhere in the State whenever the forests are in danger of fire. (*True* or *False*)

31. Fire Wardens are not regular paid employees of the Conservation Department. (*True* or *False*)

32. A permit to burn brush, slabs, sawdust, etc. in the Fire Towns within the Forest Preserve counties is not required during periods when the fire towers are closed. (*True* or *False*)

33. Which of the following policies applies to the issuance of camping permits at Forest Preserve campsites: (a) advance reservations only; (b) advance reservations for New York State residents only; (c) no reservations — first come, first served; (d) advance reservations for family groups only. (*a, b, c, d*)

34. At these campsites, no permit may be issued for more than two weeks. (*True* or *False*)

35. All of these campsites are within the Adirondack and Catskill parks. (*True* or *False*)

36. Which of the following agencies register mechanically propelled boats for operation on the inland waters of New York, and administers the New York State Navigation Law? (a) Motor Vehicle Bureau; (b) Department of State; (c) Conservation Department; (d) Department of Public Works. (*a, b, c, d*)

37. Private commercial interests may now use sections of streams and rivers, bounded on both sides by Forest Preserve lands, for the purpose of transporting logs or pulpwood, provided such waters have been declared navigable. (*True* or *False*)

38. The correct and official designation for Forest Preserve Lands is State Forests. (*True* or *False*)

39. No outdoor advertising is permitted within the Adirondack and Catskill parks. (*True* or *False*)

40. The Adirondack and Catskill parks are administered by (a) the State Council of Parks; (b) the Adirondack and Catskill State Park Commissions; (c) the Conservation Department. (*a, b, c*)

41. The Conservation Department is responsible for the care of shade trees along public highways within the Adirondack and Catskill parks. (*True* or *False*)

42. All Forest Preserve lands are within the view of Fire Tower Observers, from one tower or another. (*True* or *False*)

43. The Conservation Department's Bureau of Forest Pest Control sprays private as well as Forest Preserve lands. (*True* or *False*)

44. The forest tent caterpillar, a scourge of Adirondack woodlands in the past few years, makes a tent-like structure in trees. (*True or False*)

45. When the woods are closed by Governor's proclamation in times of fire hazard, all lumbering operations in the areas affected must shut down. (*True* or *False*)

46. Leasing of gas and oil rights on Forest Preserve lands is permitted by law. (*True* or *False*)

47. Prospecting for uranium, and subsequent mining of claims by private interests, is permitted on Forest Preserve lands. (*True* or *False*)

48. Private power companies may construct transmission lines across Forest Preserve lands, provided such construction is approved by the Conservation Department and the Department of Public Works. (*True* or *False*)

49. New highways across Forest Preserve lands may be constructed only if authorized by specific Constitutional amendment. (*True* or *False*)

50. Existing State highways in Forest Preserve lands may be relocated, in the interest of public safety, if and as deemed necessary by the Department of Public Works. (*True* or *False*)

(*Answers on page 36*)

The Department's camp on Tioga Point, Raquette Lake

Longshore treasure

by Dr. Henry M. Stebbins

The story of six days spent at one of the camps operated by The Division of Conservation Education

IT was a year and a bit ago that Sam Thomas of Owego went to Conservation Camp, but he remembers it well. Probably he'll never forget the best things he learned there.

New York's Conservation Department operates four such camps—at Raquette Lake, Ray Brook, De Bruce and Rushford. Sam's week was at Raquette Lake Camp, the one that sprawls generously over that rugged peninsula at whose point the Old Flag flies from sunup to sundown. Its steadfast red, white and blue are as beautiful to our eyes as the colors of lake, sky and forest that change with each shift of light, each passing shadow.

Perhaps an appreciation of the Flag and of the free land and free life it symbolizes takes time, even the long reach of maturity. But everything must have a beginning and a fair start helps. At Conservation Camp the boys learn much that's of immediate use, and something more that can stay with them all their lives. It comes along with a good time and the adventure of meeting the new and unusual.

But camp life is disciplined; they find out soon enough. As they step ashore from the lake crossing on a Sunday afternoon with six big days ahead of them, the planned program starts. First of all each fellow gets his physical exam., which assures his fitness for all the sports —and the tasks too—that he'll take part in. A swimming test comes next, and it includes treading water, which can be a lifesaver.

Then follows the assignment to cabins, over a dozen boys in each, and supervised by a mature counselor who knows the camp life from experience. Single bunks, upper and lower, sleep the boys, and they make up their beds for the night "right away, as a camper should," Sam Thomas explained with unconscious seriousness.

Discipline may come even sooner. "Drop a candy wrapper," my young friend remarked sardonically, "and you buy the finder a bar of candy."

After the cabins are ready for the night there's a little time for get-acquainted, buzzing around, for horseshoes and softball, and then comes supper hour. Meals are eaten in the big mess hall, the boys filing past the serving tables. Each cabin has its own dining table, with the counselor at the head of it. Grace is asked; then the chairs scrape as all settle down to their work. The food is good and there's plenty of it—plenty of appetite, too.

After supper there's some free time and then the movies start. Boys are expected to attend, and the subject matter —soils, water, forestry, shooting, fishing, study of wildlife, and so on—always has to do with the outdoors, how to enjoy it, use it, preserve it. In short, it's conservation. Before lights go out on Sunday night the kids are beginning to realize that camp life is regular, with definite times for jobs, for fun, for meals. To some of them, alas, that's a new way to live!

This impression is strengthened on Monday morning when each cabin — Owls, Foxes, 'Coons, etc.—has its day's conservation task allotted. Each day the assignment is different. It must be, for there are so many things for a kid to learn how to do.

They learn more than camp chores, for their days are well-rounded with work and play. They are shown how to handle paddle and oars—"Never stand up in a boat," Sam interpolated—and lifesaving and first aid, trapping, plug casting, and some shooting. Fifteen shots with a .22 and ten with a 20 gauge shotgun are the usual rations, and some of the boys prepare to take the Junior Hunter exam. at the end of the week. Everything is sharply supervised: a good camper, they learn, almost never has an accident.

There are other outdoor matters for their study. A "regular course" in archery is given for all, and they get a taste of forestry, being shown different kinds of trees and told their uses to man. They learn something of their uses to other folk, too—wildlife, that is. Game

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Civic organizations wishing to sponsor boys to be sent to their regional camp should contact their *nearest* District Game Manager for application blanks. The fee is $25 for each boy. District Game Managers' addresses are as follows:

For Raquette Lake: **Write Anthony Taormina, Paramount Bldg., Syracuse, or Paul M. Kelsey, Hanshaw Road, Ithaca.** ***For DeBruce:*** **Write Robert G. Ohlman, 311 Mill St., Poughkeepsie, or Albert G. Hall, Harper St., Stamford.** ***For Rushford:*** **Write Richard E. Hyde, Olean, or Robert F. Perry, Scottsville.** ***For Ray Brook:*** **Write Greenleaf T. Chase, Ray Brook, or John E. Wilson, Box 84, Watertown, or Asa H. Smith, Wildlife Research Center, Delmar.**

Protectors, Biologists, Foresters, NRA Instructors as well as Forest Rangers visit camp, give talks, answer as many of the various questions as they can, and hand out pamphlets for the kids to study in more leisurely hours.

Some effort, not so obvious as to become tiresome, goes to show the boys that animals are "people," with rights of their own. There's usually a pair of pet raccoons for them to play with, and on closer acquaintance even use as neck scarves on chilly evenings! There may be a more out-and-out predator, too, for them to study, such as a great horned owl. In Nature's scheme each one has its rightful place, and in his early teens an intelligent fellow can, perhaps without being aware of it, absorb lessons in tolerance, in charitable understanding.

Short and busy though the camp week is the boys have a chance to learn how to get along with one another. "They were all ages and sizes," said Sam, some as young as thirteen, some as old as seventeen, and cabin life is close and intimate. They develop a cabin loyalty, for "camp points" are awarded in competitions that range from softball games to cabin clean-up and "first ones asleep."

In this good mixture there are boys from cities like Auburn, Syracuse and Binghamton, from little villages and from farms. Nearly everyone at Sam's camp was from the Southern Tier.

In the wilderness, all woodsmen know, human nature is refined for definitive analysis; a man shows what he is, out there. And our boy campers get a brief taste of real wilderness, still preserved for our State in parts of the Adirondacks and elsewhere. Their little pocket of the primitive is Sargent's Pond and the country close around it; no boys are permitted to wander off alone.

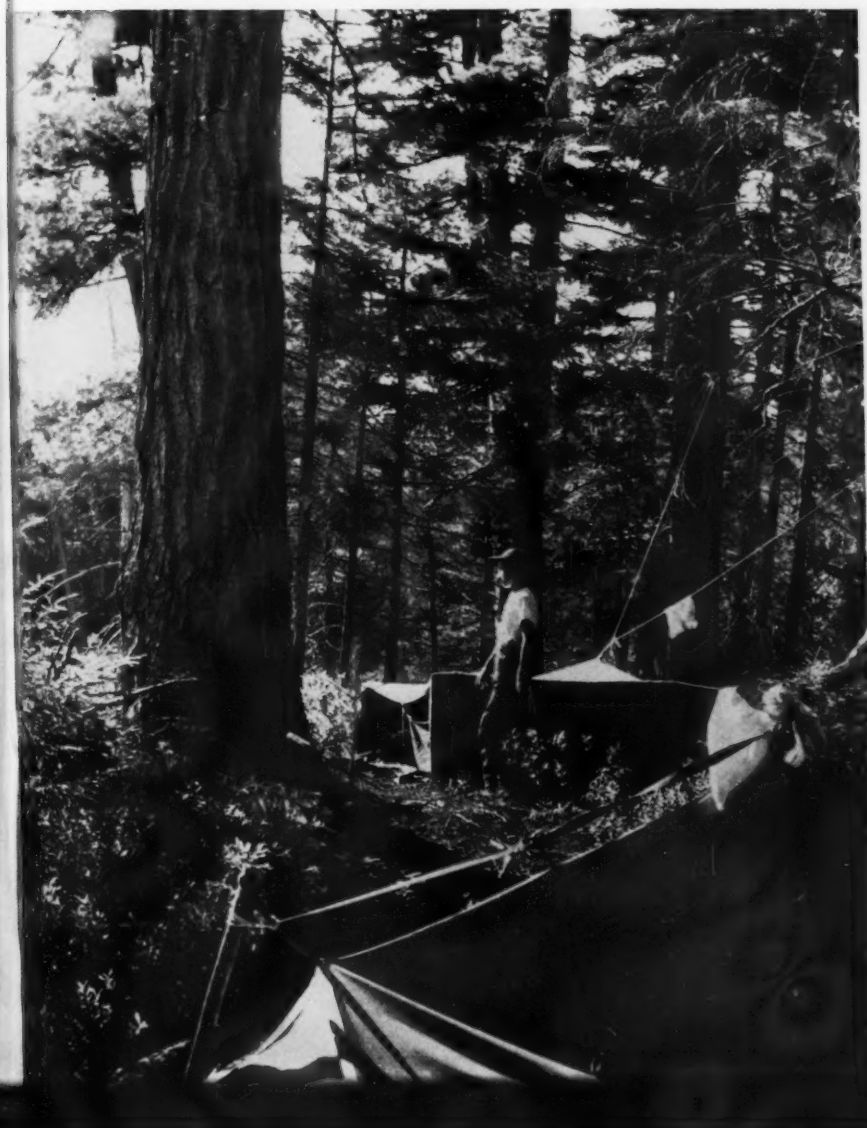
This round pond, the objective of the overnight hike, lies five miles back in. The forest crowds close to its shore in real woods fashion. Along the cleared trail Sam and his party saw deer tracks, of course, and they stared at bear sign, too, claw-marks high on a tree trunk. 'Coons commonly raid the overnight camp's garbage dump, and there are bobcats around. Another of the sights was a beaver dam not far back from Raquette Lake, and there was a Winter deer yard, too. "They'll stay right there and starve," Sam retailed the information, "if the snow's deep and all the browse in the yard has been eaten."

Although the tents are set up ready all through the Summer season, the boys had a taste of roughing it, of doing for themselves and for others. Each one carried his blankets or sleeping bag, and his share of food and camp equipment.

There were camp chores to be shared, and plenty of amusement, too. A brook trout stream runs nearby, and the pond serves for swimming as well as for a chilly early-morning wash.

The best-remembered experience of the trip, perhaps, is the night. After dark the trees crowd up close and tall, and "spooky stories around the camp-fire" accompany the last snack, which seems so late. At 9 o'clock comes bedtime and the brief lying awake in the woods silence, which isn't silence at all, for little sounds of mystery come back to the darkened camp as forest life takes up once more. Some boys are nervous before early sleep claims them; and yet, when the trip is over and the base camp reached, the lesson has sunk in: The woods are safe if you know how to take care of yourself. There's a deeper lesson, not realized perhaps for years to come. This whole overnight wilderness experience is totally new to almost all of the boys. It gives them four meals and a night in the forest, a pretty good seasoning of woods living, and something they may never experience again.

Roughing it at Sargent's Pond

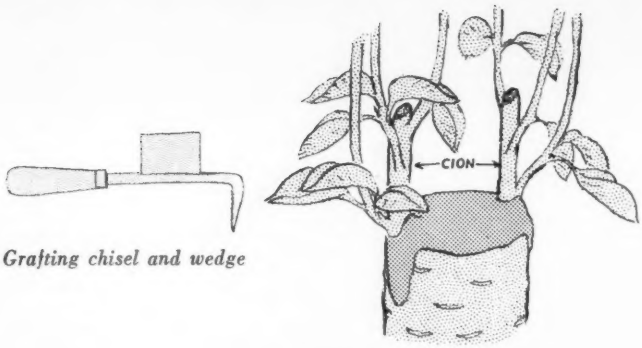


GOING to Conservation Camp is a big privilege, and most of the fellows realize it. On his first trip a boy is usually sponsored by a civic group such as a sportsmen's or Kiwanis club, "but never a second time," as Sam explained. So much is it enjoyed that a number of boys want to go back as veterans, paying their own $25 fee. But that is rarely possible; facilities are limited, and the Conservation Department feels that "new" boys should have first crack at them.

Before they go to camp, boys naturally ask around among their friends, to find out what camp life is like. "Everyone," Sam concluded, "reports favorably."

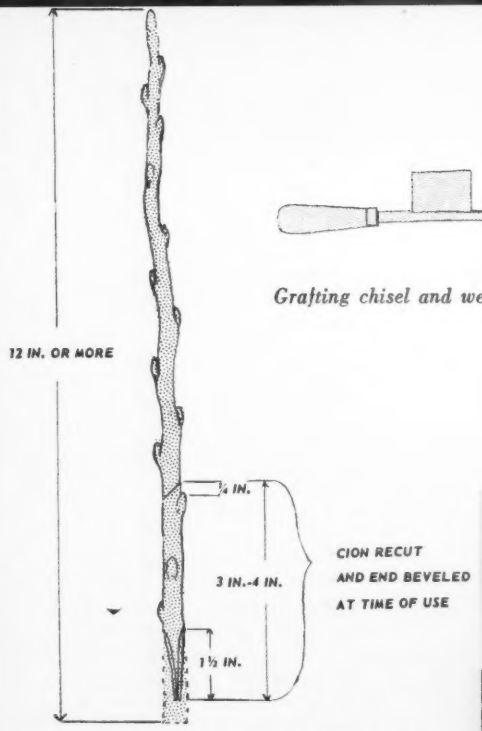
Sam comes from a sporting family and has been taught to be moderate in his statements. That's why, in the preceding paragraph, I had to record his understatement—the understatement of the month, I should judge.

Cleft G



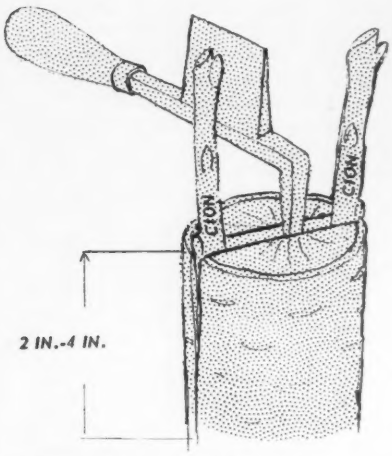
Grafting chisel and wedge

Application of grafting wax

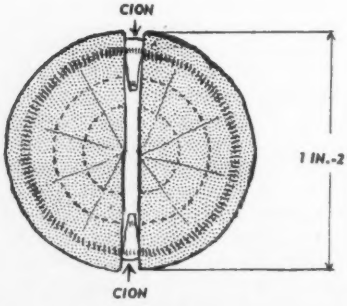


Cion wood collected Feb.-March

An ideal spot to begin habitat improvement for game. Introduction of apple trees, or pruning, or grafting of existing stock, will provide food; cover is already there.



Placing cions in position



Graft stub near main stem

FOR several thousand years and in many countries throughout the world, the grafting of fruit trees has been traditional Spring work on the farm. Grafting is an extremely simple process, but also a wonderful one when you consider the response of Nature to the tampering involved. This tampering consists essentially of transforming an existing tree (called the "stock") by adding onto it the shoots (called "cions") taken from another tree. These shoots retain the character of the tree from which they were taken, including its fruiting qualities. Grafting, then, is simply a means of introducing "new blood" into a tree that has not been producing satisfactorily.

There are other methods, but cleft grafting is simple, relatively fast and convenient. The steps involved in this method are described briefly here, and the simple line drawings illustrate, in sequence, the procedure to be followed.

The Time

In late Winter and early Spring about the time the buds are swelling, when bark is still tight to the wood. It is important that the cions be dormant even though the stock may have started growing. The cions may be collected earlier and held in cold storage.

The Purpose

To substitute desirable apple fruits for less desirable ones, and to induce fruiting of several varieties of apple in any year as well as spread the fruiting season by means of introducing early and late bearing types.

Tools and other items needed

A sharp knife, grafting chisel, mallet, pruning saw, grafting wax (many still prefer the beewax type, but for speed and simplicity use an asphalt emulsion compound) and a supply of dormant cion wood.

Grafting

Grafts on thornapple stock. Graft at left is Scarlet Haw; at right, Northern Spy.

Two thrifty Spy cions in first season of growth. Stock was wild apple tree.

Another graft on wild apple. We have plenty of such stock; need only cions.

Pruning wild apple trees gives renewed vigor to old trees, better fruit.

How to do it

If you can get an orchardist or nurseryman to show you, so much the better. But this isn't necessary because the whole thing is a simple operation.

The cleft graft is used principally in top-working larger trees where limbs of an inch to about 2½ inches in diameter are involved, but limbs less than an inch can be used. With a sharp saw, limbs are cut off squarely at a place where they are straight and free from crooks. This will give the grafts a chance to develop good conformation. The end of the stub is split with the grafting chisel. The cut so made is held open with a wedge so as to receive the cions, one of which is placed on either edge of the split.

The lower end of the cion should be cut to form a long, tapering wedge. These sloping cuts should be at least 1½ inches long, with at least two or three buds above the cut. The usual length of cions is four or five inches. One cion is enough for each stock less than one inch in diameter, but it is usual to insert two cions in larger stocks—one in each side of the cleft. On sloping branches the cleft should be made horizontally, so that the cions are lateral to each other and not one above the other.

In adjusting a cion, the cambium layer (the growing layer of cells lying close to the bark) should be placed in contact with that of the stock at as many points as possible. The thick edge of the wedge of the cion should be toward the outside, so that the pressure exerted by the two halves of the stock will be at points where the cambium layers coincide. Some recommend a slight slanting of the cion inward to make sure of the contact between the cambium layer of cion and stock to insure fusion. When the cions have been placed, remove the wedging instrument; the pressure will hold them.

Since these are so many cut edges which may dry out or allow the entrance of disease or pests, immediately cover all the cut or split surfaces with a generous amount of grafting wax or compound. Be sure to place a daub of compound on the top of the cion, too.

In the event two cions grow in one stock, the weaker one is kept headed back for a year or two and is finally cut off entirely, even with the crown of the stock. In the meantime it will assist in the formation of new tissue over the end of the stub.

That's really all there is to cleft grafting. But if you want additional information, get Cornell Extension Bulletin 882 from your County Agent. And don't let unfamiliarity with wild fruits deter you—Adam had the original difficulty, but he solved it even if he didn't know an apple from an apricot.

—Greenleaf Chase, Arthur Holweg

SEABEE Operation Lean-to

by W. Waterman

ARMED FORCES DAY is customarily observed by the military with parades or with an "open house" whereby the general public may see facilities or operational equipment. During the past few years the Naval Reserve Construction Battalions have broken away from this accepted practice and have developed a type of observance which seems to be more in accordance with their tradition. Ingenious and resourceful, the Seabees decided that the construction skills, spirit and team work which made them famous in World War II and in the Korean War in getting difficult jobs done in a hurry could best be demonstrated by an actual construction project.

Accordingly, during Friday evening of May 20, 1955 CB Naval Reserve Units throughout the United States began swinging into position for action and on the 21st and 22nd of May construction machinery roared, hammers pounded and saws whined. Thousands of dollars worth of labor was donated on those days by the Seabees—who received no pay but the satisfaction of doing a good turn at many locations for the benefit of Boy Scouts, Girl Scouts, underprivileged children and similar non-profit organizations. Practically every one of these projects provided facilities at camps where children might get to know the outdoors, thus making better woodsmen and better citizens—all of which means future supporters of the conservation movement.

This article is a description of a typical project of this type which took place at the Nassau County Boy Scout Camp Wauwepex near Wading River, Long Island. The preliminary planning began in December with a meeting between Scout Executives and the Commanding Officers from Huntington L. I. CB Div. 3-19 and Freeport, L. I. CB Div. 3-10 (L). An arrangement resulted whereby the Scouts provided building materials and the Seabees furnished "know-how" and trained hands to build lean-tos at Camp Wauwepex.

The Scouts had concrete floor slabs for the lean-tos poured in the camp area prior to Armed Forces Day. They provided lumber, shingles, nails, etc. They also furnished tents, cots, and a mess hall for the Seabees, and provided portable generators to run the power tools, also snacks, liquid refreshments and movies for Saturday night. The Navy provided food rations for the sailors, but the cooking and serving were done by the Scouts.

The Seabees studied the plans and decided on the most efficient way to use the man-power and equipment. The muster lists of both units were combed for the best qualified men for the various jobs —the framers, truck drivers, roofers, siding men, etc. Each man was assigned specific duties in line with his specialities. Each man was briefed on his job before starting for camp, and he took his own hand tools that would be needed on that job and in some instances, his own power tools.

Although this was a small scale operation, many details were considered to make every minute count, to insure that the job was accomplished safely, and to be sure that the men were well taken care of. For example, as the CB Division complement does not provide them, two medical corpsmen with field equipment were borrowed; fortunately there were only a few minor injuries for them to function on or in, and the sawbones proved to be as handy with hammers as with scalpels. Arrangements were made for Jewish, Protestant and Catholic services, movies were shown on Saturday evening, the men urged to bring bathing suits, etc.

Incidentally, the Seabee policy of looking out for their own was illustrated by what happened to the Rabbi. The Catholic and Protestant Chaplains were local men, and although an extra service on Sunday was undoubtedly a considerable inconvenience to them it was not as troublesome as the Rabbi's role. He had to drive from Freeport (a distance of about 50 miles) to conduct his service, but he seemed very pleased to be invited to make that effort. As it was known that men of the Jewish faith did not constitute a large group in the division, the other sailors thought the Rabbi's effort in behalf of the men of his faith deserved recognition—so he was quite surprised at the turnout for his service Saturday noon. Had a very fine service too.

A lean-to is ordinarily thought of as a rather primitive simple structure. Not so these. They have concrete floors, elaborate frames, Whaney edge siding, roof boards and asphalt shingle. Although the dictionary states that "they lean against posts or trees," as a matter of general information none of the lean-tos we erected were observed to so lean when last seen. About 70 Seabees were at the camp and they worked on 38 lean-tos. Many of these men were not accustomed to manual work, and those two days were the first really hot ones of the year. The woods were just dense enough to stop

any breeze, but the trees not big enough to provide much shade. And the sun poured down both days.

But the men gave everything they had to the job, and many of them were pretty well bushed by mid-afternoon. They never quit though, even when their hands got so numb that they could hardly grasp a hammer. One husky carpenter seemed to express the feelings of the entire group when he said: "I usually slack off and take a rest now and then on a job, but the bad part about *this* job is that every time I start to do that I feel guilty."

It was necessary, of course, to have some administration and direction on this operation, but it was not done from an arm chair or while sitting on a log watching someone else work. Every officer's shirt was wet with sweat and there were plenty of blisters on their hands by Sunday evening.

Everyone worked hard but they had fun too and the number of cases of liquid refreshment consumed was truly astounding. It is for sure that if the men had not been sailors they would have floated away. Many good natured insults were given and taken which often had the whole gang roaring with laughter. For example, several officers had joined forces and were building a lean-to. All graduate engineers, they were not accustomed to that kind of work with their hands and despite their willingness their progress could hardly be called speedy. Next to them was a crack group of enlisted men, carpenters, who were likewise engaged. The carpenters took the officers productively and verbally. The officers' defense to the insults that drifted their way was that they were doing "quality work." The carpenters' retort: "It's quality all right, of a damn poor sort."

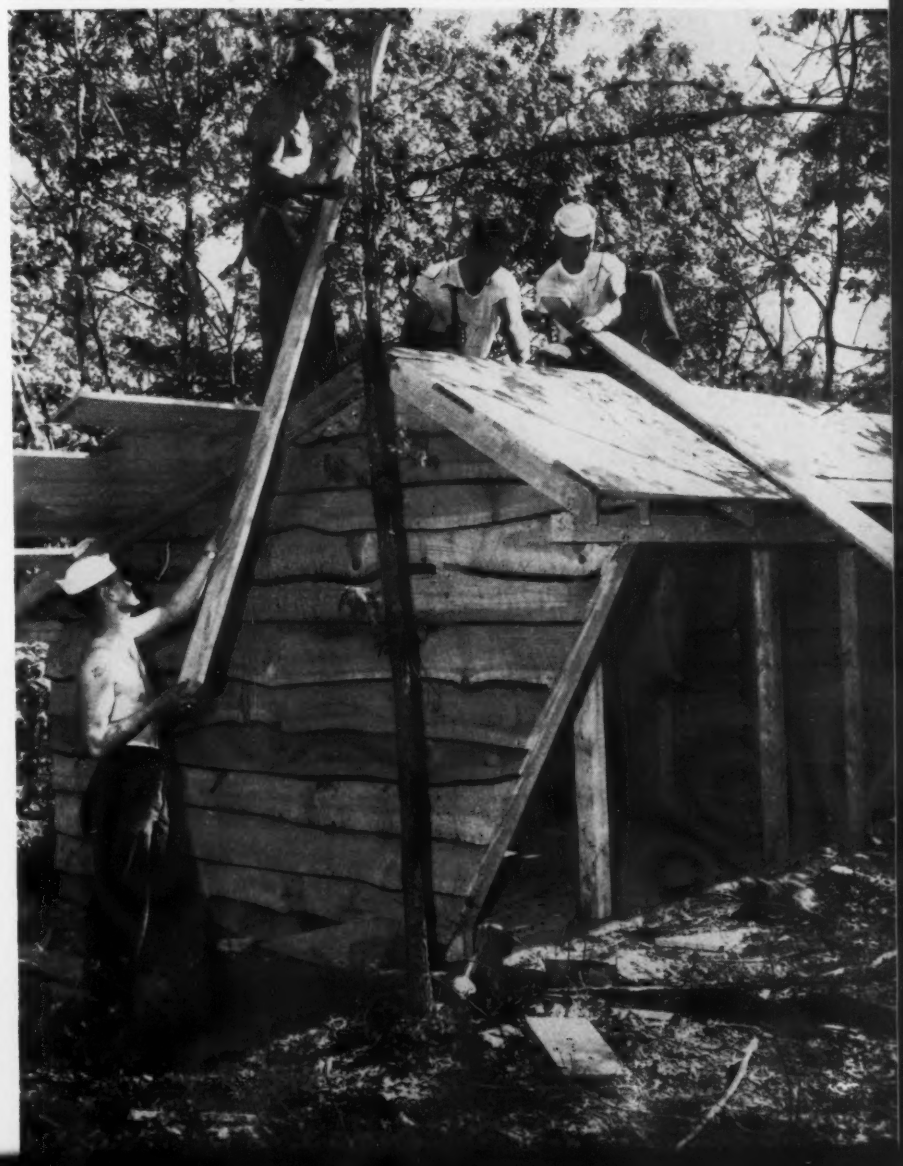
One group, in characteristic heads-up Seabee fashion, left signs on each building they finished. They were scrawled in pencil on a piece of the cardboard which came wrapped around the shingles. The text varied as they felt the circumstances warranted but typical was "Split (& how) level (not) $9995." (That one must have been pretty bad, because their usual prices were much higher.)

To save time the Seabees decided Sunday morning not to go to the mess hall for lunch; some sandwiches would be brought to the job. About the time the Seabees came out of the woods to the trail for chow, a Troop of Boy Scouts came ambling along and stopped. The reaction between the two groups was interesting. At first both sides looked silently and intently at each other. Then they really got down to work. The Scouts were loaded with camping gear and the Seabees were fairly well draped with tools. Each bore down to find out just exactly what, with what, and how the other group was operating. Purely educational.

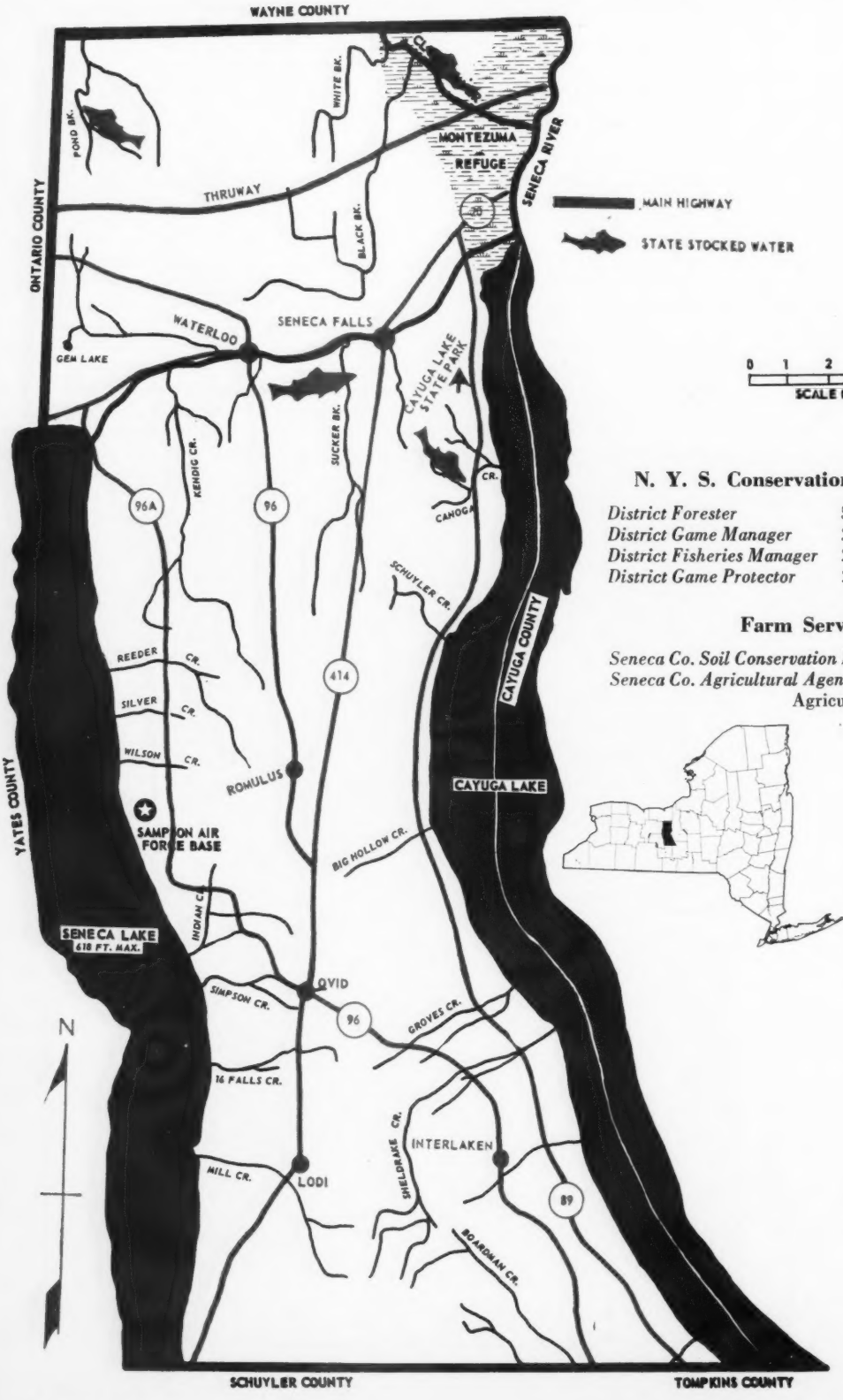
The younger Seabees learned something about construction work. They were mixed in with experienced men and had an opportunity to try their hands at different phases of the work. It was excellent training for the future—when an addition would be needed for that house they would one day buy, the garage they would need, etc. Those boys could appreciate that, and they really drank the information in, and it made the older men feel good to be able to pass on their "know-how."

One old time Navy chief looked around and remarked that it could easily be one of the Pacific islands of World War II. He was right; similar tangle of underbrush and similar rough type of construction. It was training for that next war, the war we hope to avoid by being so well trained that no one will dare take us on. The Seabees train weekly to be prepared, should that war ever come, and this involves a considerable sacrifice of time on their part. But one project, such as at Camp Wauwepex, does more to build up the morale amongst the men, and to increase their vitally important sense of team play than routine lessons or drills.

THE Seabees were a weary bunch going home Sunday evening. But they were a satisfied group inside. They felt that a good turn had been done, and they knew they had had a good time doing it. As to the Scouts, they had proved to be very fine hosts doing everything possible to make their guests' stay enjoyable. As guests quite often do while visiting, the Seabees left a little present for their host —a few lean-tos. But the Scouts had the last word: Each Seabee unit received a very fine letter of appreciation from the Nassau County Boy Scout Council. Boiled down, it said, "Well done, Seabees."



SENECA COUNTY



N. Y. S. Conservation Department Offices

District Forester	5 E. Steuben St., Bath
District Game Manager	2130 Scottsville Rd., Scottsville
District Fisheries Manager	2130 Scottsville Rd., Scottsville
District Game Protector	2130 Scottsville Rd., Scottsville

Farm Service Offices

Seneca Co. Soil Conservation District
Seneca Co. Agricultural Agent
Agricultural Hqs. Bldg., Waterloo

—Roy Irving

BOBWHITES—on the rise?

(From a painting by Louis Agassiz Fuertes)

ON July 21 last, representatives of game clubs from southern and central Columbia County met with Conservation Department employees to take part in the release of some 1,200 seven-months-old bobwhite quail from the Middle Island Game Farm. It was one of the first of over 90 degree plus days last Summer, so the release sites were all adjacent to streams, ponds or springs, in the intensively farmed areas of the county, from Nevis to Ghent. Several birds demonstrated their ability to swim short distances when their flights to freedom landed them in the water.

This release of bobwhites in Columbia County, where the Conservation Department has not stocked quail for over 20 years, is in keeping with the change in the stocking policy that began in 1953. At that time it was decided to decrease the amount of stocking on Long Island and to attempt to restore bobwhite populations in the Lower and Middle Hudson Valley. However, postwar expansion on Long Island has meant rapid increase in residential areas and factories, and a corresponding decrease in agriculture and incidentally, quail habitat. It has become increasingly difficult to find unposted lands on which to release bobwhites. Another factor has been the gradual warming up of the climate, not only Summers but also Winters, making it more likely that bobwhites could survive further north.

The very scanty records from the days of the first settlements in New York show that bobwhites occurred only on Long Island and in the more open oak-pine forests of the Hudson Valley, probably as far north as the Albany-Schenectady sand plain. In 1855, James Eights of Albany wrote in his diary: "Thursday, 11th (June). This afternoon quails *(Perdrix virginiana lath)* were very noisy, whistling at intervals of a very few seconds, in recently cleared fields about the pine plains."

There is a belief that seems to have gained strength through repetition, that during the first half of the last century, bobwhites extended their range as the forests were cleared for agriculture, until they were found everywhere in the lowland across the State, north even to Jefferson County. (The writer would welcome any *factual* information about this—contemporary newspaper accounts, magazine articles, letters, diaries, etc.) This was the period when New York was the chief wheat producer, the era of the rail, brush and stump fences, when planting and harvesting crops were still primarily hand operations, and when the size of crop fields was limited by what the farmer, his sons and his hired men could mow by hand in a day or two.

Why the quail increased in numbers we do not know, except that there was an enormous change from forest to farmland. Likewise we do not know just why the populations have been declining and the occupied range has been contracting for the last 75 years. Investigations by trained observers over the past 25 years have shown that bobwhite cannot survive where there is a continuous, heavy snow cover. There can be no doubt that a bobwhite population in the central and western lowlands would be reduced drastically by the occasional hard Winters that have occurred, like the ones we can remember: 1933-34, 1935-36, 1944-45, 1947-48.

There have been previous attempts to re-establish bobwhite in upstate New York. Beginning in 1931, quail were liberated in 42 upstate counties for three successive seasons, but without success. While there could be many reasons for this, the clincher probably was the unfavorable Winter weather. Following this, bobwhite releases were confined, until the recent change, to Long Island and the extreme Lower Hudson Valley.

What is there to indicate chances of success? In the first place, the gradual warming trend of our climate, and a whole series of mild Winters, make it more likely that bobwhite can survive, because their food supply of seeds will be more consistently available. Economic conditions have brought about a considerable revival in the growing of grain in New York, as elsewhere. Releases in groups of one hundred birds offer a better chance for at least some birds to survive and keep together. For the present, liberations are being confined to the Hudson Valley, from Columbia County south, where the Winter snow cover is seldom continuous. Whether the bobwhite can make a comeback, time only will tell.

—RALPH H. SMITH,
Game Research Investigator

Deer killed by cars as reported by Game Protectors*

Period month & year	Number by automobiles
10/38—9/39	542
10/39—9/40	683
10/40—9/41	771
10/41—9/42	550
10/42—9/43	364
10/43—9/44	418
10/44—9/45	382
10/45—9/46	420
10/46—9/47	530
10/47—9/48	719
10/48—9/49	686
10/49—9/50	585
10/50—9/51	773
10/51—9/52	944
Total	8,367
Average per year.....	598

* Note that these figures include *only* kills reported by Game Protectors. See text for probable *total* kill.

Death on the Highway

OR should the title be "Deer as Car Wreckers," or "Cars as Deer Killers"? It really doesn't matter, because a collision between a moving deer (10 to 30 miles per hour) and a moving car (40 to 70 miles per hour) is almost certain to have disastrous results for both animal and vehicle. The deer is usually killed, and the cost of repairing the car varies between $50 and $2,000, with an average cost of $250 to $300 per collision.

In New York State, Game Protectors have reported some 400 to 950 deer-car collisions a year, averaging 598 for the 14-year period 1938 to 1952. (See table.) In addition to these, Sheriffs and State Police each investigate about as many accidents as do the Game Protectors. Furthermore, in addition to the above, there were 698 deer-car collisions on the Thruway last year. Adding up these figures, it is indicated that deer-car accidents in which deer are killed amount to between 2,000 and 2,500 per year in New York State.

Human fatalities in these accidents are rare, there having been only two during the 14 years that our Game Protectors submitted reports. Injuries to humans, however, occur in 1 to 3 per cent of the deer-car collisions.

How can these accidents be reduced? First, by the exercise of elementary caution: Fully two-thirds of these accidents could have been prevented or their seriousness greatly reduced. In most cases, the car did not hit the *first* deer seen on the shoulder of the highway or crossing it, but a second or third. Investigations reveal that the driver, or some other occupant of the car, saw one or more deer before the collision, and a rather typical report shows that from one to four deer crossed the highway ahead of the car. The driver's attention was drawn to the field or woods where the deer ran, when "Wham"—another deer ran in front of the car.

Now then, deer on the move generally travel in single file. They are usually led by a mature doe, and following her may be as many as 20 other deer. The distance between deer in this line will vary from 10 feet to 200 yards. They do not follow her blindly, but they *are* like children; when the leader dashes across the road, you can expect most of the others to follow.

So, when a driver sees one or more deer cross a highway, he should slow down as soon as he sees the first deer; there may be more to come. Drivers who have hit deer report, in the majority of cases, that the accident could have been prevented if this simple precaution had been taken. They report also that the blast of a horn did not slow the deer or cause it to change its direction.

At night, as well as during the day, deer travel in single file, and tend to follow a leader. Bright headlights often cause the deer to "freeze" on the highway, and honking the horn usually makes them freeze even harder. Therefore, if you see a deer at night on or near the highway, slow down, or better yet, stop, turn off the headlights and turn on the parking lights. The dim parking lights apparently permit the deer to see the car, after which they usually leave the road.

Take a tip from a railroad engineer. He reported: "When deer are on the tracks at night, they will generally leave if I turn off the headlight and toot, not blast, the horn. But if I leave the headlight on and blast the horn, the deer usually freeze in their tracks."

When you see a deer on or near the highway, slow down, live, and let live.

—C. W. SEVERINGHAUS

This article, and especially the table that accompanies it, should provide food for thought in another direction: Are attempts to further restrict or even eliminate the hunting of deer, particularly in areas of dense human population—are such attempts actually in the best interests of either deer or people?

We have no definite information as to the geographical areas where this highway carnage was most concentrated, but certainly a great deal of it occurred in sections where deer hunting is already subject to a variety of restrictions, or no permitted at all. With such protection, the deer herd has thrived; in fact, in some localities, it has gotten completely out of hand.

We don't question the necessity for restrictions on deer hunting in heavily populated areas; public safety demands them. These very restrictions, however, have now given rise to the problem described above, and also to this question: Which presents the greater potential danger, the hunter—the archer, say, with his longbow —or the deer he hunts?

The archer's record is remarkably clean. The record of the deer is splattered all over our highways—Editor

Flies—Real and Artificial

by D. L. Collins, *State Entomologist*
*New York State Museum and Science Service**

Dragonfly Nymph

SOME of my most pleasant experiences have been fly fishing on the Willowemoc and the Beaverkill. Being by profession an entomologist, it always intrigued me to try to detect the resemblance—or lack of it—between the artificial lures and the "flies" they were supposed to represent. Most of the accounts that have been written in which attempts were made to relate the lures to their natural counterparts have been by persons other than entomologists and the terms used and classifications set up indicate, to say the least, a certain amount of confusion.

Perhaps the first literary and historical reference to fishing with flies is in a passage from Martial (40-102 A.D.) who mentions fish rising to and being taken by "fraudulent" (i.e., artificial?) flies. Whether or not this is really a reference to an artificial fly, Aelian, another Roman (170-230 A.D.) writes in his "Natural History" of a certain "fly," probably a mayfly that, although it was much sought after by fish, was too delicate and its color too ephemeral to be used as bait on a hook. Instead, therefore, the fisherman tied red wool around a hook and attached to it two feathers taken from under a cock's wattles and colored like wax. This sounds like a forerunner of a "Royal Coachman."

The mention of "Royal Coachman" brings up the subject of names and classifications. About 40 years ago Louis Rhead contributed to *Field and Stream* a considerable amount of information under the title "American Trout-Stream Insects." When this information was assembled and published in book form it bore the following amazing subtitle (practically a synopsis of the book): "*A Guide to Angling Flies and Other Aquatic Insects Alluring to Trout, Selected and Painted for Each Month of the Trout Season from Nearly One Hundred Living Specimens Native to the Rivers and Lakes of the Temperate Zone of North America, with Notes and Reproductions of* Artificial Imitation Flies *Tied by the Author and a Chapter on the Mode of Tying Artificial Flies with Assisting Charts and Illustrations of a Complete Set of New Artificial Nature-Lures Copied Exactly from Carefully Colored Life-Pictures of all Creatures that Bass and Other Game Fish Consume as Food.*"

Thus forewarned, the reader can expect almost anything, but I was somewhat taken aback by the forthright launching of the second chapter, which begins as follows: "Chapter II. System and Classification. After a careful study of the various British books on trout insects and their artificial imitations issued to date, I deem it wise *to brush aside the science of entomology, which is of no actual service to our purpose* (italics mine), and to lay before the angler a plain, simple plan whereby he can obtain just enough information . . . (!)."

Now, not so fast, Mr. Rhead. You certainly succeeded in messing it up, but not quite in abolishing it altogether; entomology is a little too tough for that! Although the famous last words of the animal trainer, "Tigers is only cats," may be paraphrased as "Flies is only bugs," nevertheless the fish are a little more discriminating; and it is just as easy for the angler, too, to learn to discriminate between stoneflies, mayflies, caddisflies, and craneflies, as it is to know them as browns, drakes, duns and spinners, especially since it is rare for any group of more than two persons to have the same ideas as to what is meant by browns, drakes, duns and spinners.

The English seem to have gone in for these names more than we have as far as the living insects are concerned, but even with us the traditional names are retained for the artificial lures.

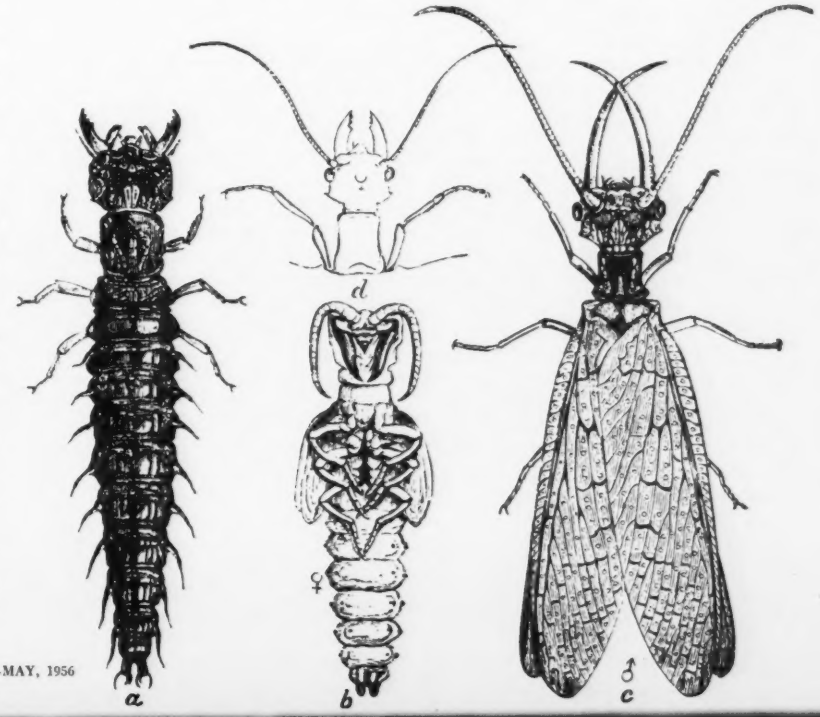
However, there is much less agreement among anglers as to what is a dun or a drake or spinner than there is among entomologists as to what is a mayfly. Thus, to Rhead a mayfly is a "drake," a cranefly is a "spinner" and a caddisfly is a "dun," while to a later author, e.g., Preston Jennings, a "dun" is an immature mayfly and a "spinner" is a mature mayfly.

The English writer Theakston proposed a "practical" method of grouping natural insects into "classes," mixing entomological and angling terms with careless abandon, as follows:

Class I, Browns; Class II, Drakes; Class III, Duns; Class IV, Spinners; Class V, House flies; Class VI, Beetles; Class VII, Ants.

Theakston's "Browns" apparently include the stoneflies (Plecoptera); the drakes are the mayflies (Ephemerida);

(a) Hellgrammite; (b) pupa of Hellgrammite; (c) male Dobsonfly (adult of Hellgrammite); (d) head of female Dobsonfly



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the duns are the caddisflies (Trichoptera) and the spinners include craneflies, daddy-long-legs and mosquitoes. The other classes, (unfortunately for the claim that it is a "system") include in each some insects that are not actually known by the names used, even by the layman.

Thus it would seem that when these proposers of "common names" and "simple systems" object to the entomological names because they say entomologists sometimes change the names or do not always agree on them, they are even more vulnerable themselves. Actually, I think we can equate the systems in a general way whenever necessary, but since whatever "popular" classification is used it always falls back on the entomological system as a standard of reference, it is just as easy and really much simpler to use the entomological names in the first place.

Most of the winged insects that have been used as trout lures are not only often found around streams, but their early stages live in these same streams and are, therefore, subject to attack by fish at all times. The adults or winged form fall victims to fish most often when they come to the water to lay their eggs, and when they emerge from their aquatic stage, before they fly away; and also, of course, like other non-aquatic insects, when they accidentally fall into the stream. The principal groups which are imitated by the fly-tier have great variations in their appearance, behavior and life history. These variations, of course, are responsible for the endless variety in artificial lures. A knowledge of the appearance and habits of some of the insects themselves is of more than academic interest to the sportsman, since this knowledge helps him decide what lures to use and when and where to use them.

In describing the aquatic early stages, the terms "nymph" (some authors say "naiad") and "larva" are used. Nymphs are the immature forms of insects which have "incomplete metamorphosis," that is, in which the general appearance does not change radically from young to adult except for the appearance of wings. Grasshoppers are good terrestrial examples. The term "larva" denotes the young of an insect which has "complete metamorphosis," that is, in which there is a resting stage or pupa, between the active immature form and the adult, during which both internal and external changes take place, so that the adult differs greatly in appearance from the young.

By far the greatest number and varieties of artifical flies are patterned after mayflies, stoneflies and caddisflies. A large number of species of each group are found in New York State. Since our first historic reference to fishing flies was probably to a mayfly, we will begin with them. It will be convenient to describe them in some detail and then describe the other groups by comparing them with the mayflies.

MAYFLIES, or eelflies or shadflies, belong to the insect order Ephemerida, family Ephemeridae. The adult mayfly has two pairs of delicate, transparent, net-veined wings. The front wings are more or less triangular in shape and are very much larger than the back wings. When the insect is at rest the wings are characteristically held straight up with their points touching one another over the back.

Mayflies differ from all other insects in that they molt, or shed their skins once again after they attain wings. The change from the nymph or aquatic stage to the first winged stage occurs on the surface of the water. Their first winged stage is termed the "sub-imago" by entomologists, but fishermen may know them as "duns," so called because of the dull smoky appearance of the wings.

The duns or sub-imagoes may live as such for a few hours, often about a day, and then shed their outer skins and emerge as the mature mayfly or imago, which is harder and shinier and may be known by fishermen as a "drake." The transformation to the drake or imago in some species, at least, may take place some distance from the water, since the sub-imagoes or duns may take off in a mass flight directly after emergence. However, the females return to the stream or lake after mating, and lay their eggs, which protrude from the lower side of the abdomen in little capsules, in the water. At this time they may be known as "spinners" by the angler, owing to their erratic movements.

The eggs hatch into nymphs, which grow larger by successive molts until some of the larger ones may be well over an inch long. James G. Needham, one of the great students of aquatic insects, remarked in one of his early works that "there are mayfly nymphs for every sort of situation in fresh water, and they are almost everywhere abundant. These are

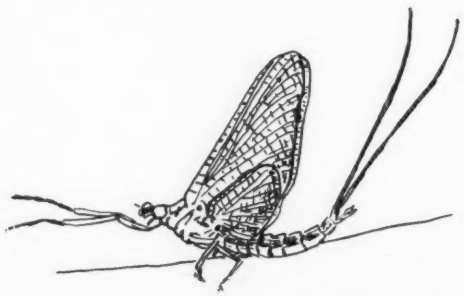
Deer Hair Nymph (Harry Darbee)
American March Brown (Art Flick)

Quill Gordon (Mrs. Dette)

Dark Hendrickson (Harry Darbee)

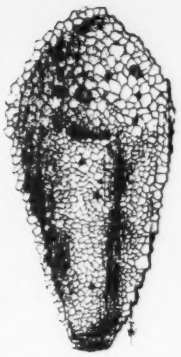
Caddisfly case, log cabin type

Coffin Fly (Walt Dette)

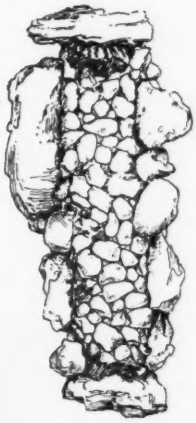


Mayfly adult

Caddisfly "mosaic" case

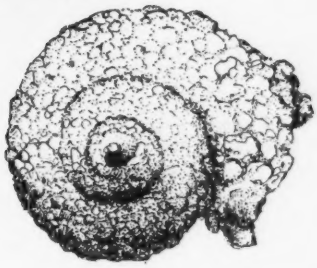


Caddisfly case, chimney type



Caddisfly case, "stone bungalow"

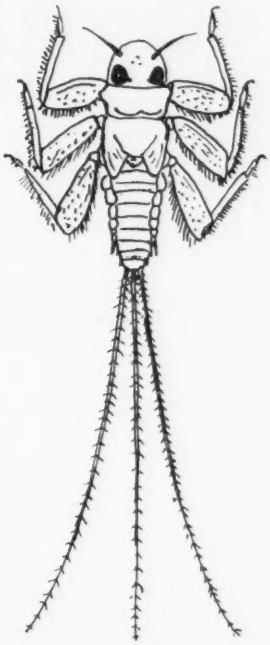
Royal Coachman (Roy Steenrod)



Caddisfly case, spiral type

Caddisfly case, stucco type

perhaps the dominant insect herbivores (plant eaters) of fresh water." Some prefer clear, swift, rocky streams—i.e., the best trout streams — and may be found at almost any season clinging to the undersides of submerged rocks. By



Mayfly Nymph

holding an ordinary kitchen food strainer downstream from a rock as it is overturned, and scraping the rock gently with the hand, many specimens may be capturned, along with stonefly nymphs and caddisfly larvae.

It is interesting to place several such net collections in a white enamel or other light-colored dish and watch how the different creatures behave. The mayfly nymphs and stonefly nymphs, if they are fairly well grown, will have the wing pads visible and quite conspicuous. Each type breathes by taking oxygen from the water by means of external gills, which are rather conspicuous by their constant fluttering movements. In the mayfly nymphs these gills are arranged along the upper sides of the abdomen, whereas the stonefly nymphs, at least most of the common ones, have their gills on the thorax, that is, well forward in comparison to the mayflies. Another difference, observable, of course, only in the living specimens, is that the mayfly nymphs characteristically swim with up-and-down undulations of the body, whereas stonefly nymphs undulate or "wriggle" from side to side. Stonefly nymphs, when judged by some of the commoner species, sometimes give the impression of being a little neater and trimmer in appearance, whereas the mayfly nymphs may have a "fuzzy" appearance due to the possession of more hairs or setae. Stonefly nymphs and may fly nymphs may or may not have bold contrasting patterns of dark lines on light backgrounds. Some of the larger stonefly nymphs are particular striking in this respect.

Another feature of both mayfly and stonefly nymphs is the possession of caudal setae or bristles or "tails." These are in the form of slender filaments at the end of the abdomen. Mayflies have either two or three of these filaments; stoneflies have two. In general the filaments on the mayfly nymphs are longer and more slender than those on the stoneflies.

In both groups—i.e., the mayflies and stoneflies — these caudal filaments are carried over into the adult stages, and, particularly in mayflies, are among the most conspicuous features that are imitated in artificial flies, including the well-known Light Cahill, Quill Gordon, Blue Dun, the beautiful Royal Coachman, and many others.

The adult stoneflies (Plecoptera) may now perhaps be sufficiently described for our present purpose by comparing them with the mayflies. The stoneflies, like the mayflies, have four wings, but unlike the mayflies the wings are all about the same size and fold flat, in a horizontal position over the body, with outer margins more or less parallel. They are poor fliers, and are often found crawling rather than flying. The stonefly family Perlidae, with the genus *Perla*, includes some of our largest common species.

The caddisflies (Trichoptera) are closely related to the butterflies and moths. Typical adult caddisflies resemble moths, not only in appearance, but in the fact that they have a complete metamorphosis, that is, they have four stages—egg, larva, pupa and adult—in their life cycle.

Like the caterpillars of some of our common moths, the larvae of caddisflies have a considerable ability to spin silk. They make use of this in building the tubular basic framework of their cases or "houses." Although some species do not make cases, many of our commoner forms do, and the possession of a case popularly typifies the caddisfly order. Each group has its own types or forms of cases, which are so characteristic that they can be used in keys for identification. Some species build little log cabins of very small twigs and pieces of wood; some make bark shelters; others use small pebbles and grains of sand to build stone bungalows. Certain species which occur in the Southwest are said to use flakes of opal and grains of gold as their building blocks. Shelters made from these objects

must be beautiful indeed, and it would not be difficult to visualize a gold panning operation started as a result of finding a golden caddisfly case.

As to general design there are also many forms. Some are spiralled like snail shells, some are cylinders, some are cones, some are straight and some are curved. Other larvae simply build a net across a depression or crevice in a stone. There are also forms which construct only the silken tube, without external ornamentation or reinforcement. Some larvae cement their cases to rocks, others move about freely, taking their houses with them. The larger larvae that move about may often be seen with the front end out of the case, pulling themselves along by means of their legs, The larvae may be seized by fish, case and all.

PERSONS who make stream surveys often get the habit of referring familiarly to caddisflies as "Trichops," and to stoneflies as "Plecops." Mayflies (Ephemerida) remain "mayflies." If anglers and fly-tiers could get used to these terms also it might eliminate some of the confusion mentioned in earlier paragraphs.

Looking back to the table of "classes" of "flies" proposed by Theakston, I think we have now disposed of the browns, duns and perhaps most of the spinners by referring them to our mayflies, Plecops and Trichops. Some of the other insects that are commonly found in the same streams are of equal interest.

Hellgrammites are rather formidable looking, 2-inch-long, dark colored, centipede-like creatures which occur under rocks in swift streams. Larger specimens can be found on stream banks, under rocks and logs in moist places, where they have gone to transform to the adult stage. Other names by which this insect is known are "alligator" and "crawler." They are the larvae of a large insect known as the dobsonfly. The dobson has net-veined membranous wings which spread to four inches. The males have tremendous curving jaws which give them a ferocious appearance. Hellgrammites are easily imitated in black, soft rubber lures which are fished as wet flies.

The predaceous diving beetles and the water scavenger beetles have active larvae which are also among the insects that hide under rocks in swift streams. They are somewhat like the larvae of ground beetles in general appearance having well-developed legs and antennae and very effective jaws. The adults of both of the principal water beetle families vary from large brown or black beetles an inch or more long to specimens as small as plant lice. The common large predaceous diving beetles are flattened, brownish, and blunt at each end, whereas the large water scavenger beetles are black, shining, shaped like a round-bottom boat, and pointed at both ends.

The larvae of many species of midges or gnats may be very numerous in trout streams and are an important item of fish food. Some of those most frequently observed are of a bright red color and are called blood worms. They are cylindrical and rather long (some are an inch or more in length) thin, and smooth. Like other larvae of two-winged flies, they do not have legs on the thorax, a feature which distinguishes their order ("Diptera") from all other aquatic larvae. Many of them construct and live in tubes of silk, covered with particles of sediment. These tubes are usually either built up out of the bottom or attached in some way to a support.

Two of the principal families of blood-sucking Diptera—the blackflies and the mosquitoes — also have aquatic larvae. Mosquito larvae are found in quiet water but the blackfly larvae live in rapid streams. They differ from the other insects mentioned in that they attach themselves by the posterior ends to the upper surfaces of rocks and other objects bathed by the current. The head end swings free with the current, and has a pair of fans or strainers near the mouth, to strain out food organisms from the stream. They are thus in a vulnerable position and this unique feature of attachment near the surface permits the larvae to be cleared out of streams when control is necessary, with little or no damage to other stream fauna.

Craneflies are sometimes compared to very large mosquitoes; sometimes also to a daddy-long-legs. These comparisons will, perhaps, serve to identify the adults. The aquatic larvae look like large maggots. They are sluggish, may be brown, white or greenish in color, and have a very tough skin.

LASTLY come the largest and most aggressive of all—the dragonflies. If we had not begun our discussion by referring to "duns" and "browns," we would certainly have placed the dragonflies at the head of the list. The adults are among the most active, graceful and beautiful of all insects. Some of the larger ones are among the swiftest of living creatures. They can sometimes be seen keeping up with automobiles and trains going at least 40 miles per hour.

Both adult and nymphal dragonflies are carnivorous. They greedily devour all sorts of smaller insects, including smaller species of their own order. The nymphs have a unique adaptation of the face and mouthparts which enables them to be "arm chair hunters" and at the same time enjoy the fruits of the chase. The lower lip is hinged in such a way that it can be extended forward a considerable distance to grasp some careless victim that would otherwise be passing by well out of range.

The adult dragonflies, by way of making up for their lethargic youth are extremely energetic hunters after mosquitoes and other insects, and have many unique structural features which facilitate their activities. Most of these adaptations are in the direction of streamlining, accommodating the strong muscles that power the wings, and allowing for the stresses and strains incidental to their flight habits. The basic adaptive structures, both internal and external, and the type of activity made possible by these peculiarities strongly suggest a helicopter. The following abridged quotation from Dr. J. G. Needham reads like an engineer's description of special features of a favorite model of aircraft:

"In each segment [of the thorax] the infolded edge has been extended and thickened to form a stiff ridge that stands edgewise inside the thorax. The inner edge of that thickening is further stiffened to rodlike or ladder-like form ('scalariform'), which provides an inflexible support to withstand the pull of the powerful muscles that move the wing. . . . These internal braces . . . are set at such an angle with its middle plane that they oppose each other and balance the stresses with those opposed on the other side of the body. No muscles attach to the scalariform part of the brace; they serve only for support. . . ."

"There is a strong backward slant of the part of the thorax that supports the wings (it would be called the fuselage in a plane). The plates are put together in such a way that where they meet strengthening ridges are formed. There is a merging of ridges on the back into a brace, the edges of which "swing out in a graceful curve to meet at their outer ends and form there on each side a protecting shield in front of the wing roots. An exposed corner is thus strengthened to meet the shocks of the dragonfly's hard-driving flight.

"Correspondingly, the side plates at the rear of the metathorax are expanded downward to meet behind the leg bases and below the level of the abdomen. These meet and fuse in a flat median area. . . .

"When we consider the perching habits of dragonflies, their momentary pauses and sudden flights, we appreciate the advantage of this skewness. The legs are put forward where they readily reach and grasp vertical stems; and the wings are moved backward and tilted, with their cutting edges directed obliquely upward. In this position, a simple sculling action lifts the body instantly from its support and launches it in the air."

Dragonfly nymphs also have unique adaptations for their particular mode of life. The labium, referred to above as the "lower lip," is not only hinged to allow it to reach out in front of the head, but it also has hooks and spines at the far end with which the prey is grasped. Needham calls the apparatus a "combination of hands, carving tools and serving table."

Another special feature of the nymph is located at the other end of the body, namely, the "rectal respiratory chamber." This is an expansion of the rear end of the alimentary canal. The gills hang from the inner walls of this chamber. Water is drawn into the chamber through the anal orifice, which is provided with an elaborate set of strainers. The large size of this chamber, itself, with its relatively narrow orifice, and the strong muscles with which the walls are provided, permit the nymphs to expel water from it with great force, thus driving the body forward by jet propulsion.

WE have already given the dragonfly a relatively large amount of space, but we must, before closing, point to yet another striking fact: Although dragonflies embody the most modern ideas in airplane design and jet propulsion, at the same time they are among the most ancient of all insects. Fossil specimens that measured 29 inches across the wings, but which otherwise resembled those of of our day, have been found, dating back to Paleozoic times.

Persons who like to think of themselves —that is, to think of man—as the most progressive animal might well pause a moment to consider the fact that our most advanced engineering designs have been in general use by insects for at least 200 million years.

Conservation — For the Birds

ONE of the tools of wildlife management is habitat improvement. This constitutes the changing of conditions in a given area to make it more favorable for the development of preferred species of plants or animals.

Each Winter and Spring many people wait with anticipation to see their own wildlife management practices in operation. These folk are attempting, by changing the nesting and feeding opportunities for birds, to attract them so they may be better observed.

A limited number of birds will co-operate and actually use birdhouses. These are the species that normally gouge a hole in some tree or pole for nesting purposes, or take over the nest previously made by a feathered friend. (Many feel it was the willingness of the wood duck to use man-made nesting boxes that kept this species from extinction.)

Certain requirements must be met to make a house attractive to a nest-searching bird. Size is important: If the interior is too small, the adult is cramped; if too large, the young may not get sufficient brooding. Entrance size is also a factor: If the opening is too big, larger birds and predators can get in and make things downright uncomfortable; if too small, nothing can enter. Placement of the birdhouse is likewise important: Some birds like shade, others the sun. Some prefer a lot of room around the nest; others choose concealment. These are a few of the considerations to keep in mind when planning birdhouses.

Not all types and styles of birdhouses have been shown, but we have tried to present a few simple and popular models. These may be modified by the builder so long as he stays close to specifications of the house for the particular species desired. (See chart.) Incidentally, white-footed mice make interesting and valuable occupants of birdhouses. Their food during the Summer months includes a great many insects, and weed seeds.

Bird feeding, as distinguished from bird housing, presents few problems. Food made available at feeders will attract many species throughout the year. It is true that in Winter most birds have migrated and the potential variety is limited. Year-round feeding, however, adds to the attractiveness of an area as a nesting site.

A scene on the center-spread shows Winter feeding of rabbits and pheasants. This is justified if the objective is to draw wildlife to an area for observation, but is frowned on as a regular wildlife management practice. Game managers feel it is better to keep wildlife in balance with available natural foods. To increase populations, an attempt is made to increase the natural food supply with plantings, or to improve conditions for growth of food plants.

Indicative of the widespread interest in birds, their housing and feeding, is the diversity of sources for material used in this article. Dave Cook, of our Division of Lands and Forests, showed up with his ideas for a house and feeder which had taken him several years to perfect. Diagrams of these are included. At about the same time we received a letter and drawing from a young Boy Scout in St. Joseph, Mo., explaining a new style of bird feeder which he had designed. We wrote for permission to use his idea in this article. Here is his reply:

Dear Mr. Trimm: I would be very glad for you to use my plans and drawing of the all-purpose feeder. It is part of my work on the Hornaday Conservation Award.

Since the time that I sent the plans out I have passed and received Life Scout Rank. I am now working on my Eagle Rank. If I can complete the rest of my requirements I will be one of the youngest Eagle Scouts. I was 13 in December.

I have had so many nice letters from the different Conservation Departments on my plans. I am so thankful for the many people who are willing to help young boys.

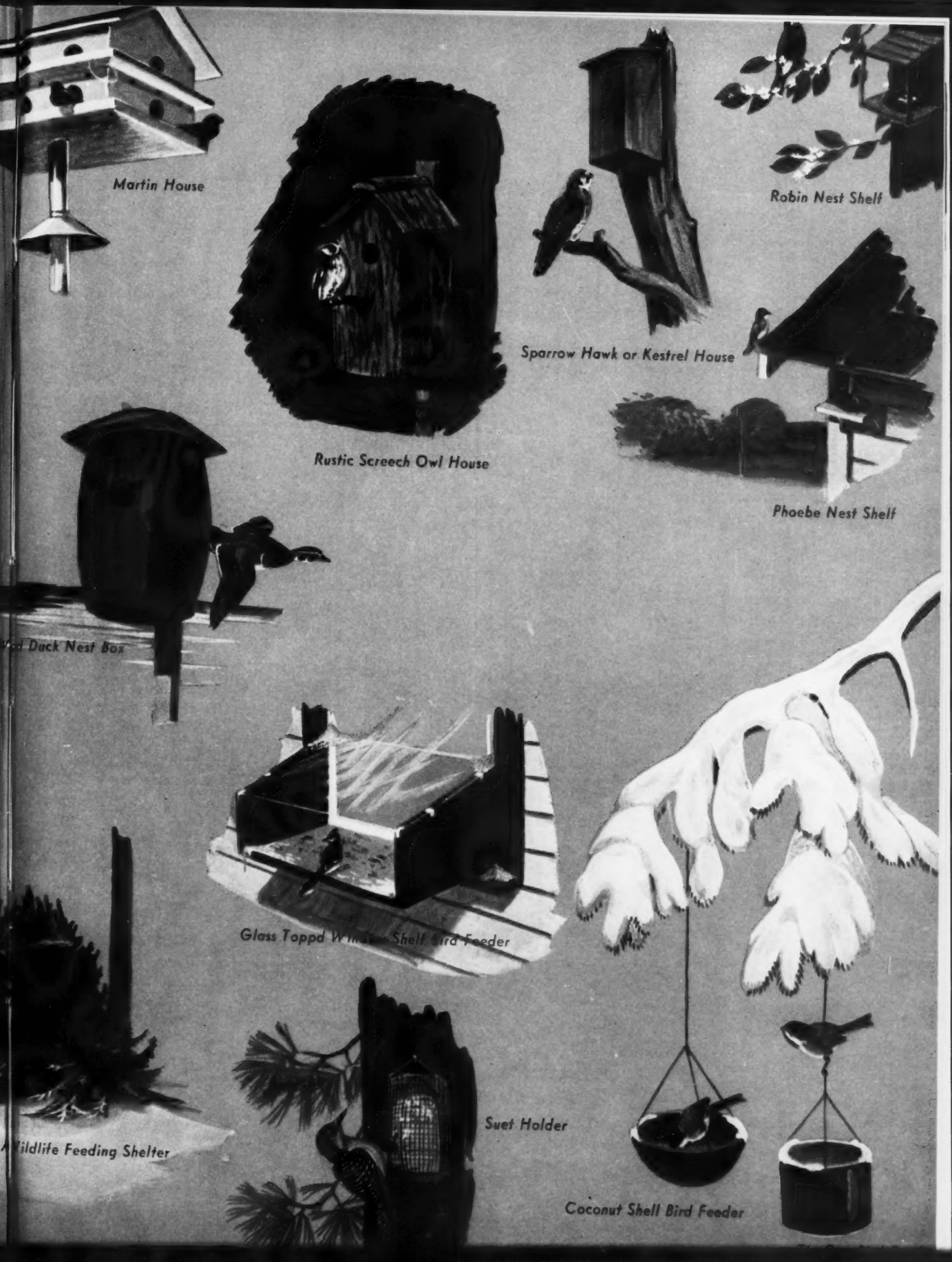
One of the letters back, one from Ohio, asks if birds would not feel enclosed in this feeder. We have mine up and it has accommodated many Cardinals and Snow Birds. At other times we have seen squirrels in it. The one closed side is hinged and it can be left open at a slant, with a small brace, and still protect the food but allowing two avenues of escape. We have not found, though, that the birds are around the feeder at the same time as the squirrels.

Yours truly,
Dennis Shaw, Rt. No. 7, St. Joseph, Mo.

Young Dennis Shaw, and all those of you who enjoy planning improved conditions for our birds, are practicing wildlife management and conservation in a very real way.

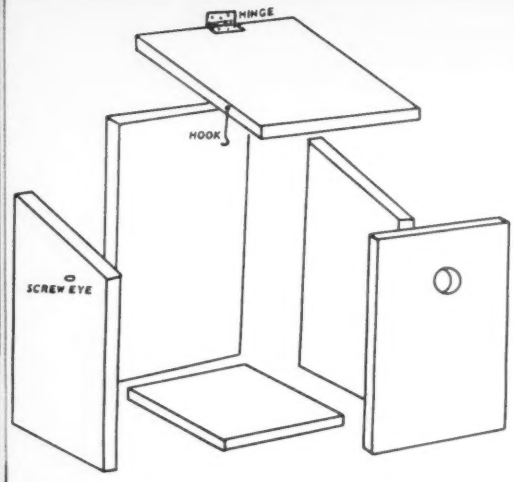
—H. WAYNE TRIMM

Gourd Bird House
Nesting Material Holder
Bluebird House
Nuthatch House
Wren House
Glass Backed Weather-proof Bird Feeder
Suet Holder
Window Shelf Bird Feeder
Old Christmas Trees
TRIMM

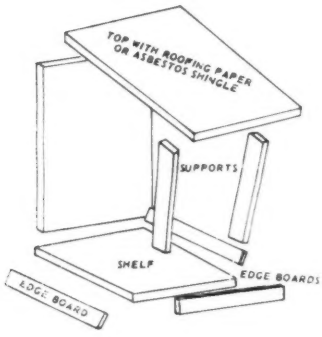

Martin House
Rustic Screech Owl House
Sparrow Hawk or Kestrel House
Robin Nest Shelf
Phoebe Nest Shelf
Duck Nest Box
Glass Toppd
Shelf Bird Feeder
ildlife Feeding Shelter
Suet Holder
Coconut Shell Bird Feeder

CONSERVATION FOR THE BIRDS

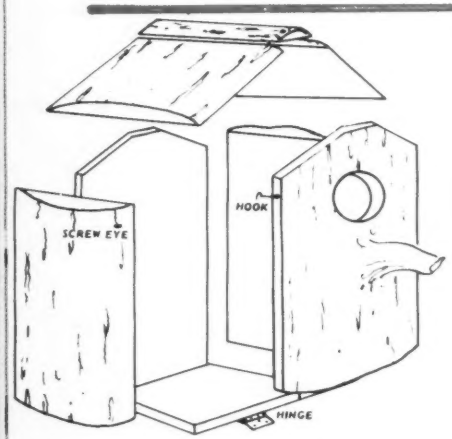
Houses and Feeding Stations



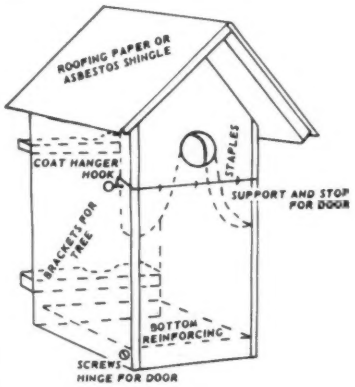
Basic plan for simple birdhouse. Vary dimensions to suit species desired.



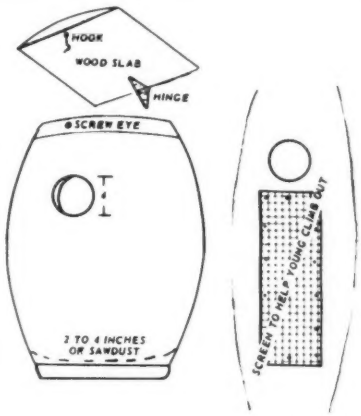
Nesting shelf for robins



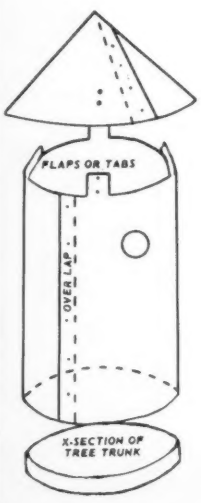
Rustic birdhouse made from slabs

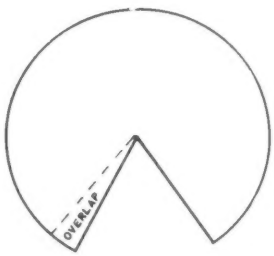


"Dave Cook Special" birdhouse made from orange crate



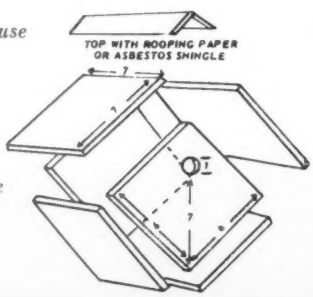
Nail keg wood duck house



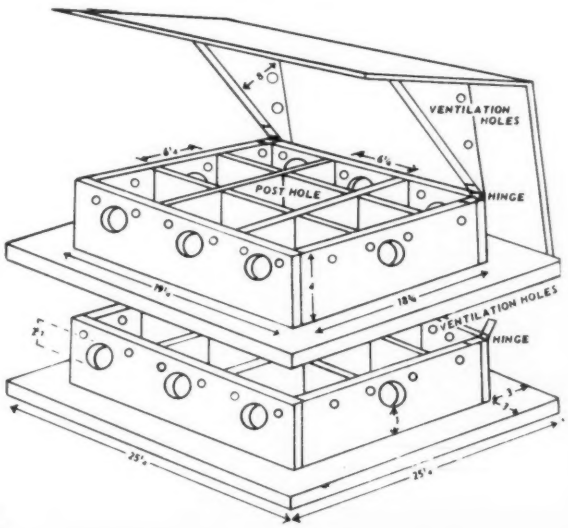


Roof of tar paper birdhouse

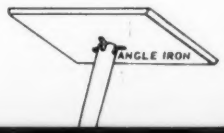
Tar paper birdhouse

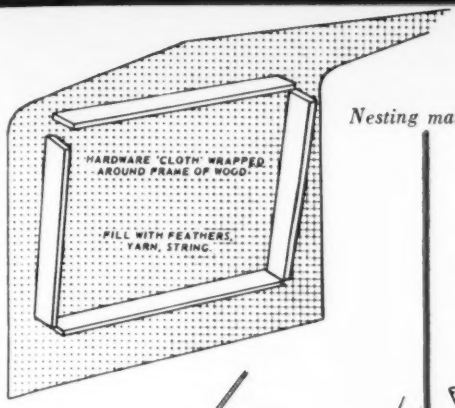


Simple wren house

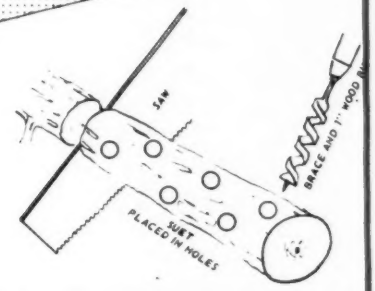


Martin house

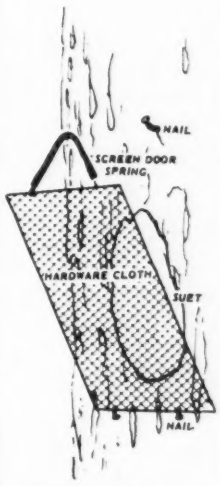




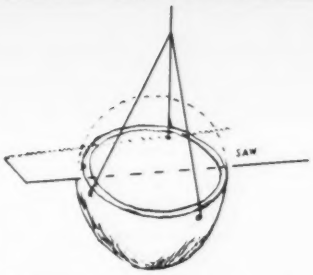
Nesting material holder



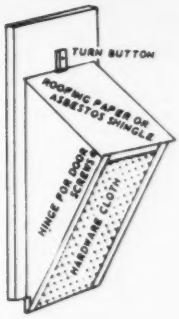
End of tree trunk (Christmas tree) for hanging suet holder



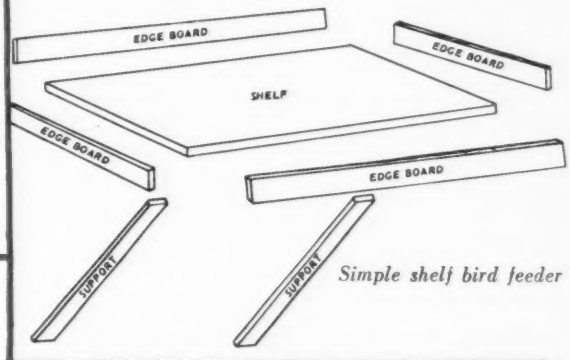
Simple suet holder



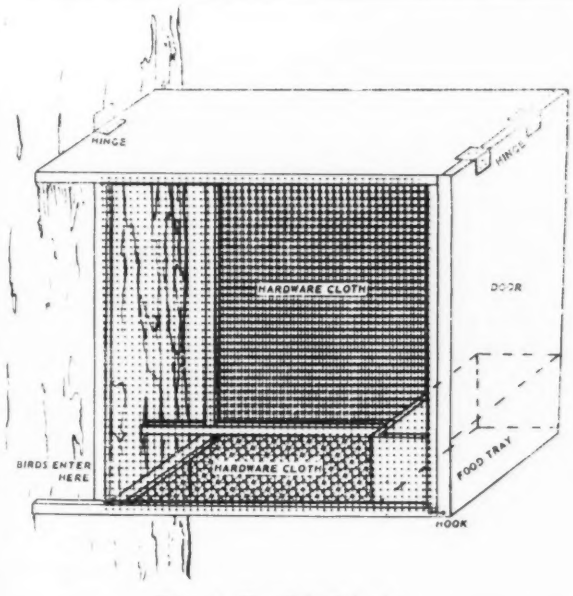
Coconut shell hanging bird feeder



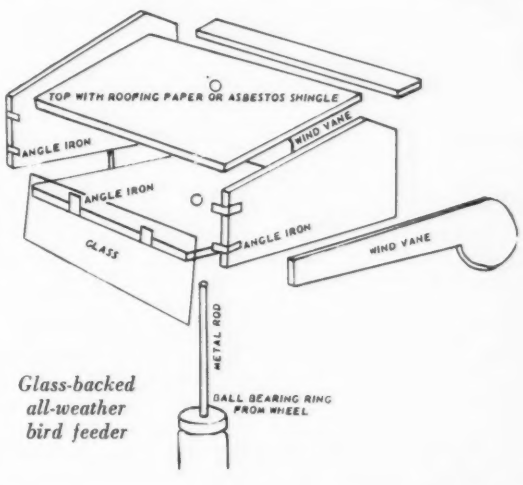
"Dave Cook Special" bird feeder



Simple shelf bird feeder



"Dennis Shaw" bird feeder



Glass-backed all-weather bird feeder

SPECIES OF BIRD	DIMENSIONS OF HOUSE				
	Floor Space	Height	Hole above Floor	Diameter of Hole	Distance above Ground
House Wren	4 in. x 4 in.	6 in. to 10 in.	6 in. to 9 in.	1 in.	8 ft. to 20 ft.
Chickadee, Nuthatch, Downy Woodpecker	4 in. x 4 in.	7 in. to 11 in.	6 in. to 10 in.	1 ¼ in.	5 ft. to 25 ft.
Tree Swallow	5 in. x 5 in.	6 in. to 10 in.	5 in. to 8 in.	1 ½ in.	5 ft. to 25 ft.
Eastern Bluebird	5 in. x 5 in.	8 in. to 12 in.	6 in. to 10 in.	1 ½ in.	5 ft. to 20 ft.
Crested Flycatcher	6 in. x 6 in.	8 in. to 14 in.	6 in. to 12 in.	2 in.	10 ft. to 40 ft.
Flicker	7 in. x 7 in.	8 in. to 18 in.	6 in. to 16 in.	2 ½ in.	10 ft. to 25 ft.
Woodduck, Hooded Merganser	8 in. x 8 in.	14 in. to 20 in.	12 in. to 15 in.	4 in.	10 ft. to 25 ft.
Sparrow Hawk or Kestrel, Saw-Whet Owl	7 in. x 7 in.	16 in. to 18 in.	13 in. to 17 in.	3 in.	20 ft. to 50 ft.
Screech Owl	8 in. x 10 in.	12 in. to 18 in.	10 in. to 17 in.	3 ¼ in.	10 ft. to 30 ft.
English or House Sparrow (Nest Box)	5 in. x 6 in.			Open	10 ft. to 30 ft.
Robin (Nest Shelf)	6 in. x 8 in.				10 ft. to 30 ft.
Phoebe (Nest Shelf)	4 in. x 7 in.				5 ft. to 25 ft.

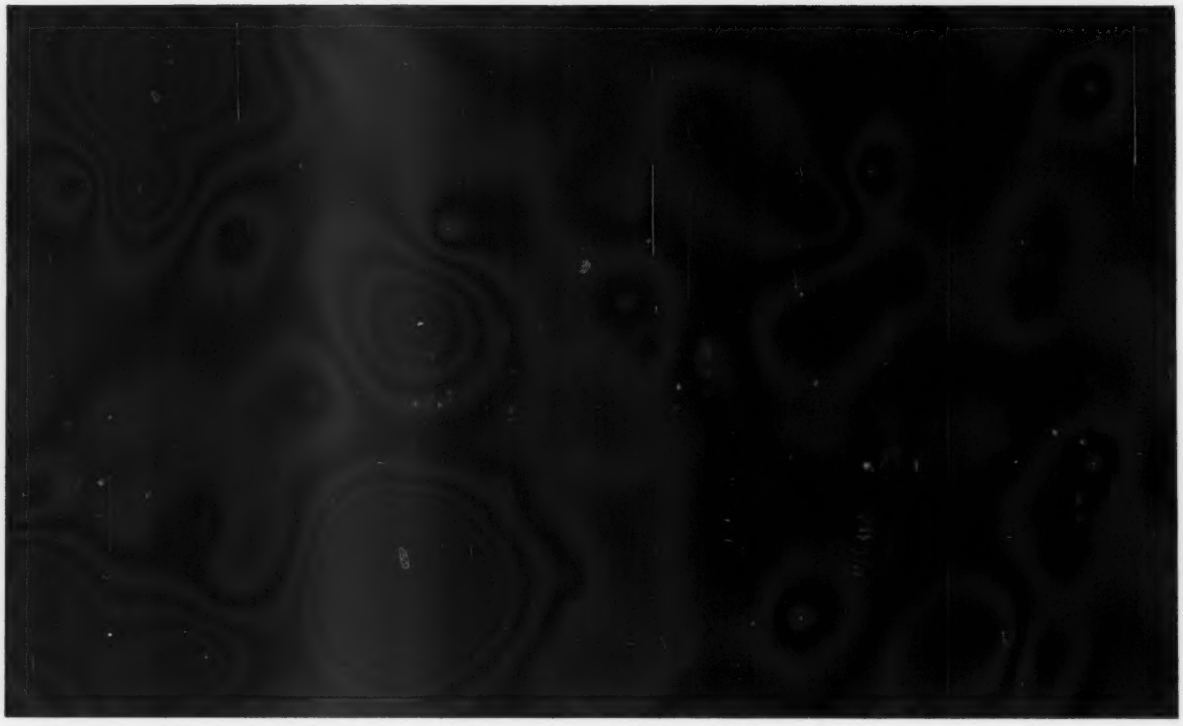
1. Nesting shelves for robins may be placed on trees or the sides of buildings; nesting shelves for phoebes should be placed under eaves, bridges, or in old barns or buildings.

2. Martin houses should be placed 10 to 20 feet from the ground in the open. For more secure fastening, the post is extended through the center of the house to the roof.

3. Tar paper bird houses are cheap to make but are temporary structures, seldom lasting more than two seasons. The top is made from a circle of tar paper from which a wedge has been removed. Soft aluminum rivets are used for assembly. The bottom is attached last and is held in position with copper tacks. A small gap should be left between roof and sides for ventilation.

4. Owl houses are most effective if placed in an inconspicuous location.

DIPPING FOR SMELT



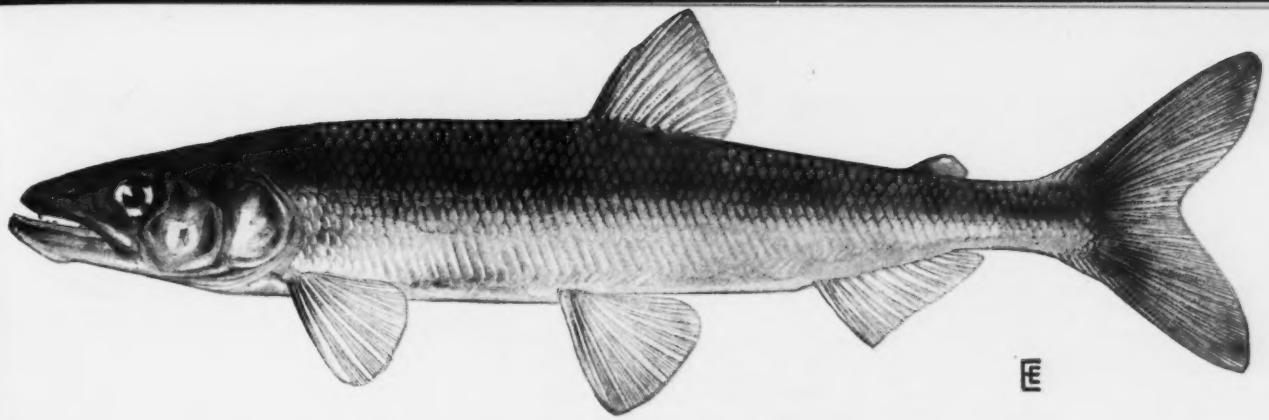
Smelting off Taughannock Creek, Cayuga Lake

THE smelt are running! Those magic words send hundreds of curious characters dashing into attics, cellars and closets to resurrect their gear, get out their nets and mend them, fix up their lanterns—and patch their rubber boots. This last is important: Ice water pouring in through a hole is an unpleasant reminder that you should have gotten around to this chore a lot sooner, but thoughts of last year's sport and anticipation of the tasty smelt dinners to come may make even that situation bearable.

The equipment needed for a smelt dipping expedition is neither expensive nor extensive, but to the uninitiated, substitutions for the accepted gear often prove highly unsatisfactory. Some kind of rubber footwear suitable for wading is a must. And since this is a night operation a good light is necessary; a gasoline lantern, preferably with a reflector, is a good dependable source of illumination, and by comparison a flashlight is inadequate. But the chief armament in this battle for the smelt is the dip net. Excellent scaps or nets especially constructed for "smelting" can often be purchased in sporting goods stores in the areas where this type of operation is permitted. In any case, the handle should be light and strong and fitted with a metal hoop to receive the mesh. The important thing is to have a light-weight rugged scap that will stand the gaff of lightning jabs into the water (sometimes accompanied by hard contact with the rocky bottom). As to the container for your catch, that can be a creel, bag or jar suspended from the shoulders or neck—your hands must be free for more important duties.

Many dip netters arrive early in the evening at their favorite streams just to make sure that they will have a place to fish. Dipping is done both in the stream proper and in the lake at the mouth of the stream. If competition from other "smelters" does not force an early entry into the water, a waiting period while smelt enter the stream will pay dividends in a greater catch. Stream scap netters use a different technique from those in the deeper water at the lake. Able to see the silvery smelt working along the stream bed, they "take aim" with their scap nets, whereas in the deeper water at the mouth "blind dipping" is the common practice. In either case your only reward may be a net full of assorted gravel—but on the other hand you may come up with a half dozen of the little silver fish. Continued disturbance around the stream's mouth by over-eager netters will discourage the fish from reaching the stream—and, incidentally, bring down the wrath of the up-stream scappers. In certain areas this problem is met by mutual agreement among the dip netters, who periodically make a mass exodus from the stream at a given signal so as to give the fish a chance to come up. All hands reap the benefits from this waiting period in the form of increased catches. Unlike some fish that are attracted to light, smelt are repelled by it; therefore lights are taboo except when actually fishing.

SMELT (or icefish, as they are sometimes called) are relatively small fish averaging between three and eight inches in the Finger Lakes but as long as twelve inches in Lakes Erie and Ontario.



SMELT
Osmerus mordax (Mitchill)
From adult male 10½ inches long

Typical smelt fishing gear

Although originally a saltwater fish, they have become landlocked in many of our lakes and ponds. It is reported that the smelt population in the Great Lakes was built up from individuals that escaped from an introduction of smelt as forage for landlocked salmon in a Michigan lake, while many New York waters contain smelt as a result of introductions from spawning runs out of Long Island Sound at the Department's Cold Spring Harbor (Long Island) Fish Hatchery.

Each year the Department publishes an order that sets forth the regulations governing the taking of smelt by scap or dip net with regard to the waters open, season, hours, creel limit, and net specifications. Anyone entitled to take fish by angling in New York can participate in this thrilling sport.

Smelt spend much of their life down in the deep, cooler parts of lakes in the habitat usually occupied by lake trout and salmon. But in the Spring, usually in April in Central New York, after the ice breaks up and the water temperature starts its slow climb, smelt run up out of the lakes and into the tributary streams on their annual spawning migration. The smelt run only at night, returning to the lake each day. The species is very sensitive to water temperature and even after the smelt run has started a few cold days and nights may halt their up-stream spawning run. Smelt prefer streams with gravel bottom similar to those utilized by spawning trout. Many of the Finger Lakes' tributaries used by smelt are small snow-water streams, carrying little or no water during the Summer months.

The enjoyment of smelt scapping does not end with a successful fishing expedition, since the eating quality of this associate of the trout family is nothing short of a gourmet's delight. When rolled in batter and fried in deep fat you have Nature's own and original fish sticks. Cleaning is a simple matter which, after a little practice takes only a few seconds; a slit up the belly permits removal of the head and "innards" in one operation. A pair of scissors is preferred over a knife for this job by many fishermen. Whether or not scales are removed is a matter of personal preference.

The role of smelt in relation to the associated fish species is not well understood. At one time smelt were introduced into waters to serve as forage for salmon and trout, but in recent years biologists have been divided in opinion as to their value for such purposes. Stomach analysis has shown that smelt are capable of utilizing fish for food at an early age—and thus are potential predators on young lake trout as well as competitors for food.

Smelt populations often exhibit marked changes in abundance, but it has not been shown that fishermen's catch is a contributing factor to this situation and, since scapping appears to be a very effective method for sportsmen to take the species, the Conservation Department annually sets as liberal "dipping" regulations as possible. This species has a relatively short life span, and most of the smelt taken by dip netting are probably one or two-year-old fish. Harvest of the smelt by dip netting will be continued wherever this method is in keeping with good fisheries management.

—A. C. Petty,
District Fisheries Manager

Conservation Library

Part 2

Books on Trees and Shrubs

(The first installment appeared in THE CONSERVATIONIST *for February-March, 1956 and dealt primarily with books on identification of animals. In future issues reference guides will appear on non-woody plants, minerals, soils and natural resource management.)*

READING GUIDE: ***Charts of separate plant groups show recommending authorities across tops; the books they recommend down left margins. Asterisks show specific recommendations of individual authorities. Accompanying digests show source and briefly outline the contents of each book listed.***

	*Banks	*Ogden	*Edminster	*Littlefield	*Smith
HOW TO KNOW THE TREES *H. E. Jaques*	☆	☆			
KNOWING YOUR TREES *G. H. Collingwood*	☆		☆	☆	☆
TREES OF NEW YORK STATE *H. P Brown*	☆	☆		☆	☆
MANUAL OF THE TREES OF NORTH AMERICA *C. S. Sargent*	☆			☆	☆
MANUAL OF CULTIVATED TREES AND SHRUBS *A. Rehder*	☆	☆	☆		☆
NATIVE WOODY PLANTS OF UNITED STATES *W. R. Van Dersal*			☆		
SHRUBS AND VINES FOR AMERICAN GARDENS *D. Wyman*		☆	☆		
GRAY'S MANUAL OF BOTANY *M. L. Fernald 8th Ed.*		☆	☆		☆
THE CULTIVATED CONIFERS IN NORTH AMERICA *L. M. Bailey*				☆	☆
KNOW YOUR TREES *J. A. Cope and F. E. Winch*		☆		☆	
ILLUSTRATED GUIDE TO TREES AND SHRUBS *A. H. Graves*		☆		☆	☆
FRUIT KEY TO NORTHEASTERN TREES *W. M. Harlow*				☆	
TREES OF THE EASTERN UNITED STATES AND CANADA *W. M. Harlow*		☆		☆	
TWIG KEY TO THE WOODY PLANTS OF EASTERN NORTH AMERICA *W. M. Harlow 4th Ed.*				☆	☆
TEXTBOOK OF DENDROLOGY *W. M. Harlow and Harrar*		☆		☆	
KEY TO WOODY PLANTS *W. C. Muenscher*		☆		☆	☆
NATURAL HISTORY OF TREES *D. C. Peattie*				☆	
THE TREES OF LONG ISLAND *G. H. Peters*				☆	
TREES, YEARBOOK OF AGRICULTURE				☆	☆
CHECK LIST OF NATIVE AND NATURALIZED TREES OF THE UNITED STATES *Elbert L. Little, Jr.*				☆	
HANDBOOK OF THE TREES OF THE NORTHERN STATES AND CANADA EAST OF THE ROCKY MOUNTAINS *R. B. Hough 4th Ed.*					☆
COMMON TREES OF NEW YORK *J. S. Illick*		☆			
NEW BRITON & BROWN ILLUSTRATED FLORA OF THE NORTHEASTERN U. S. AND ADJACENT CANADA *H A. Gleason*		☆			
TREES FOR AMERICAN GARDENS *D. Wyman*		☆			

**DR. HARLAN P. BANKS, Head, Department of Botany, N. Y. S. College of Agriculture, Cornell University. DR. EUGENE C. OGDEN, State Botanist, N. Y State Museum. DR. FRANK EDMINSTER, State Conservationist, U. S. Department of Agriculture, Soil Conservation Service. RALPH SMITH, Game Research Investigator, N. Y. S. Conservation Department. EDWARD LITTLEFIELD, Superintendent of Forest Management, Division of Lands and Forests, N. Y S. Conservation Department.*

How to Know the Trees: (1946) by Harry Edwin Jaques; Wm. C. Brown Co., Dubuque, Iowa. Designed as key suitable for beginner. Illustrated with simple line drawings of characteristic parts of certain species. Includes range maps and descriptions.

Knowing Your Trees: (1937) by G. H. Collingwood; American Forestry Association, 919-17th St. N.W., Washington, D. C. Contains distribution maps of the more important species of American trees, pictures in black and white of their growth forms, leaves, flowers, fruits and bark. An instructive book for the beginner and a good reference work for the professional.

Trees of New York State, Native and Naturalized: (1921) by H. P. Brown; N.Y.S. College of Forestry Technical Publication No. 15, or

Trees of Northeastern States, Native and Naturalized: (1938 commercial edition of the above); The Christopher Publishing House, 1140 Columbus Ave., Boston, Mass. (May be out-of-print.) Written primarily as a textbook for forestry students. Condensed technical description with introductory material on elementary dendrology. Has an interesting supplementary chapter on the linguistic sources of tree names and a very complete glossary of technical terms. Plate for each species, containing line drawings of leaves, fruits, flowers and seed.

Manual of the Trees of North America: (1933) by C. S. Sargent; Houghton-Mifflin Co., Boston, Mass. Rather complete technical descriptions of distribution, line drawings of twigs, foliage, flowers or fruits, and identification keys to all the native trees of North America north of Mexico. In need of revision, but still an excellent reference. Technical.

Manual of Cultivated Trees and Shrubs: 2nd Edition (1940) by A. Rheder; Macmillan Company, New York. Brief technical descriptions and diagnostic keys for the cultivated trees and shrubs hardy in the temperate regions of North America. Establishes 7 hardiness zones based on average annual minimum temperatures and the behavior of cultivated plants therein. Technical, not illustrated.

Native Woody Plants of the United States: (1938) by W. R. Van Dersal; U. S. Govt. Printing Office, Washington, D. C. Range, black and white pictures, descriptions and wildlife use of trees and shrubs of U. S. Insert maps of climate and soils of U. S. Good bibliography. Does not contain a key to species.

Shrubs and Vines for American Gardens: (1949) by Donald Wyman; Macmillan Company, New York. Features shrubs and vines suitable for cutivation, the characteristics that make them desirable, including use by wildlife, growth form, hardiness, etc. Good black and white illustrations and drawings make this book useful to the amateur and professional botanist and landscape gardener.

Gray's Manual of Botany: (1950) 8th Edition (Centennial) A Handbook of the Flowering Plants and Ferns of the Central and Northeastern U. S. and Adjacent Canada, by Merritt L. Fernald; American Book Company, New York. For more than 100 years and through its eight editions this has been a standard reference work for flora of the northeast. More than 1500 pages. Some line drawings and a good glossary.

The Cultivated Conifers in North America: (1933) by L. M. Bailey; The Macmillan Co., New York. Description of the species, varieties and horticultural forms of the native North American conifers north of Mexico, and the principal introduced species. Chapters on propagation, landscape use, Insects and diseases. 114 line drawings and 48 full page plates. For those who have or seek some technical knowledge.

Know Your Trees: Cornell 4-H Club Bulletin #85, (1948) by J. A. Cope and Fred E. Winch. Distributed by the New York State College of Agriculture at Cornell University, Ithaca, New York. Excellent popular description of 50 trees common in New York State, with explanation of technical terms. Contains non-technical Summer and Winter keys for identification. Each species illustrated by line drawings. While prepared primarily for 4-H girls and boys, is suited equally well for adults.

Illustrated Guide to Trees and Shrubs: (1952) by Arthur Graves; published by author, Wallingford, Conn. Especially designed for field identification. Treatment is technical but accompanied by glossary of technical terms. Includes native species of woody plants and those commonly cultivated in the Northeastern States, particularly the Greater New York Area. 116 figures and 45 plates, including drawings designed to bring out diagnostic features. Bibliography.

Fruit Key to Northeastern Trees: by W. M. Harlow, New York State College of Forestry, Syracuse, New York. Obtainable from the author. For technical identification.

Trees of the Eastern United States and Canada: (1942) by W. M. Harlow; Whittlesey House, McGraw-Hill Book Co., New York. Pocket-size manual for field use. Suitable for technical or popular use. Includes practical pointers on identification and use. The most practical all-around guide to native eastern trees. 152 photographic illustrations. 7 plates of line drawings showing diagnostic features and several unique color plates. Bibliography.

Twig Key to the Woody Plants of Eastern North America: 4th edition, by W. M. Harlow, New York State College of Forestry, Syracuse, New York. Obtainable from the author. Photographs of twigs and buds, and identification key. Good for professional or beginner.

Textbook of Dendrology: (1941) by Harlow and Harrar, McGraw-Hill Book Co., New York. Complete technical treatment of the important forest trees of the United States and Canada. 224 photographic illustrations, glossary, and bibliography of 256 references.

Key to Woody Plants: (1946) by W. C. Muenscher; Comstock Publishing Company, Inc., Ithaca, New York. Identification keys for the more common native or naturalized woody plants of the Northeast, in Summer or in Winter condition, based on buds, twigs, leaves and fruits. Semi-technical. A few descriptive illustrations.

Natural History of Trees: (1950) by Donald Culross Peattie; Houghton-Mifflin Co., 2 Park Street, Boston, Mass. Popular description of tree species native to the eastern half of North America, south to the Georgian highlands. Particularly valuable for its inclusion of American folklore dealing with the different species. Illustrated by drawings in an original style resembling old fashioned woodcuts.

The Trees of Long Island: by George H. Peters, published by the Long Island Horticultural Society, Long Island Agricultural and Technical Institute, Farmingdale, Long Island, New York. Discussion of native and introduced trees on Long Island, past and present, with special descriptions of particularly large or interesting specimens. Excellent photographic illustrations of specimen trees.

Trees: U.S.D.A. Yearbook, (1949). Supt. of Documents, Govt. Printing Office, Washington, D. C. A compendium of articles about trees, forests, use of wood, etc. A gold mine of information on the subject. Includes illustrations, charts and bibliography.

Check List of Native and Naturalized Trees of the United States: (1953) by Elbert L. Little, Jr.; Agriculture Handbook No. 41, Forest Service, U.S.D.A., Supt. of Documents, Govt. Printing Office, Washington, D C. Technical reference books on nomenclature and geographic distribution of the trees of the United States and Alaska.

Handbook of the Trees of the Northern States and Canada East of the Rocky Mountains: 4th Edition (1924) by Ronseyn B. Hough. Published by the author, Lowville, N. Y. Descriptions, excellent photographs of trunks, leaves and fruits, general distribution maps of the trees of the Northeast including those commonly naturalized.

Common Trees of New York: (1927) by Joseph S. Illick, American Tree Association, Washington, D. C. Pocket manual of 86 native and naturalized trees of New York. Descriptions, line drawings, of twigs, leaves and fruits. Currently out-of-print; see in libraries.

The New Britton and Brown Illustrated Flora of the Northeastern United States and Adjacent Canada: 3 Vols., (1952), New York Botanical Garden, New York. Easily used reference for identification of flowering plants with many accurate drawings in black and white. Suitable for amateur and professional.

Trees for American Gardens: (1949) by Donald Wyman: Macmillan Company, New York. Trees, native and naturalized, suitable for cultivation. Characteristics that make each desirable are discussed with emphasis on ornamentals. Black and white photos and drawings. Hardiness zone map in color. Good for professionals and amateurs in botany and landscape gardening.

The Elderly Bird Watcher

by Lawrence A. Kohn

WHEN I was ten I joined the National Audubon Society and I believe sported a button as guerdon, but it was a timid and ephemeral union. I can summon up the memory of an early morning trip to Central Park under the guidance of our grade teacher (who, it may be surmised, had sparked the membership drive) but I cannot with certainty recall even a robin. Soon thereafter my father introduced me to trout fishing, and on this I doted. Here arose a conflict: That 50 years ago the wildlife groups were pledged to take no animal life I cannot now be certain, but whether it was so or mere fantasy, I thought fly fishing inconsistent with my oath, and I resigned for the first time in my life from a national organization.

Many years later I found myself in bird-shooting country, and I fell into line and bought a shotgun. It never fitted me, and I never learned to use it handily, but I managed to bring down an occasional pheasant. It was necessary to know the markings of the sex at which one blazed, which in the pheasant was easy. Progressing to cold upland trips after woodcock or partridge, I hardly needed to study the quarry, since I never had a clean crack at either. I knew that in the Spring there were robins, and I met the loon on distant lakes, but ornithologically I remained a heathen.

Our married interest in birds began to warm only a few years ago, when we made a trip to Quebec for trout with two veterans at the bird-watching game. They asked us what use there might be for glasses and had the sense to disregard our advice. In ten days they identified at least 40 species, and it looked so easy that on our return we bought Petersen.* At about the same time we acquired a country cabin already equipped with a feeding station and we began to notice who came to taste our seeds.

We are both, alas, in the bi-focal decades, and this is a considerable handicap. There is a flash of color in the trees, but by the time both spectacles and binoculars have been focussed the bird is far away. The veteran bird-watcher exercises some charm which induces his prey to pose, almost indefinitely, in good light, turning perhaps slightly from time to time to assist in a difficult identification. Our birds, on the contrary, know every trick of elusion, such as getting between us and the sun, which limits observation to the silhouette. We are neither of us insensitive people; Mary can carry in her head for days a color to be matched for the household and hit it to the angstrom; I can predict almost at the strike whether the brown trout which has taken my fly is fresh-stocked or a wintered fish. But with birds we fail. Although we know the song of the woodthrush, we have never managed to connect it with a view of the singer. I abandoned long since any pretense at differentiating the warblers, and any comment I make on a bird of prey is pure guess work. We are in fact still uncertain about the hairy and downy woodpeckers. Nevertheless, we persist. Our range is narrow: Robins, cardinals and bluebirds, gulls, crows and red-winged blackbirds, with chickadees and nuthatches at the feeding station. Simple fare, but we have learned not to ask for wine.

The last straw fell recently. There had been a sprinkle of snow in the night. We were driving along the shore of one of the Finger Lakes when Mary announced a flock of ducks and I slithered to a halt. There they were, 20 or so in number, bobbing up and down a hundred feet from shore. We were immediately aware of a find, for they were white-crowned and white-backed. Mary reached for the Petersen while I broke out the binoculars for a thorough study of the markings, the color of the bill, the other differentials so familiar to the accustomed watcher, so difficult for the aging tyro. Observation conditions were ideal; the light was good but not blinding, and we had not disturbed them. Nevertheless we spoke in whispers, and feared to open the door of the car lest they take flight. But for once we found that we were enjoying the indifference to observation which birds exhibit to the pro. White-crowned, white-backed; no common duck this. Not a baldpate nor a bufflehead; there was the white back. Perhaps some Arctic species, blown South by an early Winter?

The binoculars wavered, came to an adjustment and we had the identification. The white marking was snow, and we had spotted a flock of decoys.

* *A Field Guide to the Birds*, Roger Tory Peterson, Houghton Mifflin, Boston.

the back of the book

The Sugar Maple—
our new State Tree

BACK in 1846, D. J. Browne, writing in "Trees of America," had this to say about the sugar maple: "The extraction of sugar from this tree is a valuable resource in a new country where it abounds; but it is obvious that this mode of obtaining sugar is only destined for a certain stage in the progress of society, and eventually gives way to the sugar of commerce, produced by cane. For this reason we shall not detail the process of its manufacture, as it cannot be regarded as a matter of practical utility. In a country like the United States intersected by canals, railroads, and other channels of intercommunication, where labor is expensive and fuel becoming more and more valuable, the manufacture of this article cannot fail to be an unprofitable occupation." He then goes on to say: "Towards the end of the season, when the sap becomes uncrystallizable, it is either made into molasses or syrup, or is exposed for two or three days to the sun, when it is converted into vinegar by the acetous fermentation. It is also sometimes made into a kind of beer."

With these remarks the author of a century ago dismissed the economic future of the sugar maple. He would roll over in his grave if he could see figures on syrup production published by our Department of Agriculture and Markets. And he would not believe his ears if he were around today and heard the friendly furor and the political palaver of the past few months between various states and Canada.

It all began with the introduction of a bill in the current session of our State Legislature proposing the sugar maple (*Acer saccharum*) as the State Tree. How New York has existed so long without one, we don't know,* but anyway as soon as the word go around the battle was joined. The first blast consisted of a charge of grand larceny from our neighboring state of Vermont: By what right does New York usurp the sugar maple—which has been Vermont's official state tree since "way back" in 1949? And who ever heard of New York maple sugar anyway? Etc., etc.

Then, in swift succession, the "syrup" states of New Hampshire, Maine, and—believe it or not—Kansas got into the act, whereupon the Province of Quebec added an international flavor to the brew with a sweeping indictment of all syrup produced in the states. Kansas apparently felt justified in entering the squabble, if only as a mediator, not because it's a heavy maple syrup producer, but because they hold an annual pancake derby out there which would certainly make a good testing and tasting ground.

The Legislation is currently pending,** but we've no doubt that sooner or later the sugar maple will emerge as the State Tree. Meanwhile, the controversy over the quality of various syrup is to be decided on the tongues of a committee of tasters at the second annual State Maple Festival to be held at Cooperstown on April 6th. This affair is a joint effort of the State Maple Producers' Association, and the N. Y. State Department of Commerce. The winner will be awarded a Governor's Cup and we hope everyone will go home happy. Whether maple beer will have anything to do with the degree of joviality—well, we'll wait and see.

Seriously, the sugar maple is big business in New York. In 1955 the value of New York's syrup and sugar alone was over $2 million. As a saw timber tree it shares the spotlight with yellow birch as the most widely used and highly valued species of all the hardwoods in the State. Because of its creamy white beauty, its hardness, its resistance to wear and impact, its general distribution and abundance in New York, sugar maple (or hard maple, as it is also known in the trade) is put to a wide variety of uses.

To name a few: It's square danced upon Saturday nights; it's bounced on and rolled over by bowling balls; it's toppled and pounded as bowling pins; it's chopped on by meat cleavers; it's clicked on the pavements of the nation by millions of ladies' heels; it's Scrabbled nightly in games of skill—and it sometimes flies across the kitchen in the form of a rolling pin. Maple can take it.

And maple gives too — to those who know its wonderful color on a still Autumn afternoon; to those who seek its dense and cooling shade from the hot Summer sun, and to those planters who have established the maple as our favorite ornamental tree.

—ED. HUBER,
Supervising Forester

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* In 1889 by a vote of the school children, the sugar maple was selected as the "State Tree" although no official recognition was ever given to this action.

** As this issue of the magazine went to press we were notified of passage of the Maple Tree Bill by the Legislature. Plans are now afoot for Governor Harriman to sign the bill into law at the Second Annual Maple Festival to be held in Cooperstown, April 6.

American foresters generally

"American Foresters generally, and the men of the Service in particular, have always been willing to tackle any job to make any personal sacrifice for the good of the work, and they have always had the Forester's long look ahead. They have seen the great end from the small beginning, and have done cheerfully the hardest kind of hard work, have exercised the most trying patience, have hung on with the grimmest determination, often for a distant result, the full flower of which they can not hope to live to see." —*Gifford Pinchot in the foreword to "The Forest Ranger," by John D. Guthrie, published by Richard G. Badger, The Gorham Press, Boston, 1919.*

Striped bass

The controversy between sport and commercial fishermen on Long Island erupted in the Legislature again this year with a handful of bills seeking to make the striped bass a "game fish." Actually, the proposed legislation sought only to restrict the manner of taking this species to "hook and line," not to prohibit its sale nor to set any restrictions on creel limit.

Both sides were represented at the joint public hearing on conservation legislation and their testimony, together with research findings on the status of the striped bass, was studied by the Assembly Standing Committee on Conservation. On March 5 the Committee made this report:

1. The present high abundance of the striped bass along the Atlantic seaboard, which is conceded to exist by those on both sides of this question, means that this restrictive legislation is not based upon a conservation need.

2. The striped bass has been the subject of study for a number of years by a number of eminent marine biologists, none of whom recommend such a law. On the contrary, some of them have gone so far as to say that the elimination of all commercial fishing for this highly prized food fish would mean that this particular food resource would not be fully utilized.

3. Under the leadership of the Atlantic States Marine Fisheries Compact Commission, to which all of our Atlantic coastal states are signatory, a coast-wise study of this species is now under way. It is being carried forward by the states in co-operation with, and under the supervision of, the Federal Fish and Wildlife Service. The Committee is told that up to this time, none of its findings support such a drastic measure.

4. The Committee is much impressed with the healthy growth of salt water angling as a recreational sport, and the figures which were offered in testimony to show that the sale of tackle, bait and other goods and services purchased by salt water anglers, represent an important economic consideration. It believes that salt water angling should be encouraged by all fair and reasonable means, and has in the past reported favorably on a number of measures which had this object in view.

5. At the same time, the Committee feels that the residents of Long Island, who, like their forebears, have engaged in commercial fishing, are entitled to consideration in view of the lack of any showing that their fishing operations are endangering or even depleting the striped bass population.

6. The Committee believes that what is essentially involved in the controversy about this legislation is a conflict of interest between two groups as to who should be permitted to fish, where they should be permitted to fish, and with what type of fishing gear. The presently proposed legislation seeks to go all the way in reserving this fishing opportunity for hook and line fishermen, to the complete exclusion of those who for many years have taken this species with commercial gear for food purposes.

7. The Committee seriously questions that such a drastic measure is necessary in order to provide an adequate fishing opportunity for the hook and line fishermen. It believes that, in view of the fact that the present stock of striped bass is adequate for both types of fishing, a study should be made to determine whether it may not be possible to devise legislation which will provide the proper fishing opportunities for both groups.

8. The Committee has, therefore, asked the Joint Legislative Committee on Revision of the Conservation Law, to make a study of this question in the ensuing months and to bring in recommendations for the consideration of the next Legislature. The Joint Committee has agreed to undertake this study and has indicated that, in doing so, it will work as closely as possible with responsible representatives of the divergent interests which are concerned.

Based upon these considerations, conclusions and developments, the Committee came to a decision *not* to report favorably on this legislation at this Session.

Bernard's Kamp-Pack

We're not in the advertising business, but here's something a lot of people have been looking for—light weight, concentrated, moisture-and-heat proof food packages which will last indefinitely. It's the Bernard Kamp-Pack, put up in four-man or eight-man packs and containing enough food to feed four or eight men "three squares" a day. A week's supply of food for four men weighs only 28 pounds and fits neatly into one small pack-basket.

The four-man pack includes a can opener, salt, candy, a mixing cup, shortening, first aid lotion, sponge and detergent—besides the food. The aluminum foil wrappers can be used as cooking utensils, cups, baking sheets or as measuring and mixing containers. The food consists of Ralston cereal, pancakes with maple syrup and hot chocolate for breakfast; chicken noodle soup, Boston baked beans, vanilla instant cold water pudding and fruit punch for lunch; vegetable beef soup, chicken pot pie complete with biscuit bread, apple nugget sauce and chocolate malted milk for dinner.

If you don't want the regular Kamp-Packs, you can make up your own from a choice of 120 items of food put up in either four-man or eight-man individual packages. Price of the four-man Kamp-Pack (three meals) is $9. Price of the eight-man Kamp-Pack is $13.50.

Your local Army-Navy store should have them. —NICK DRAHOS

The Legend of the Dogwood Tree

AT the time of the Crucifixion (so the legend goes), the flowering dogwood grew as large as the giant oaks and other monarchs of the forest. And, so strong and firm was its timber that a dogwood tree was chosen for the Cross. But having a tender heart, the tree was sorrowful about being put to such a cruel use.

Sensing the compassion of the beams from which He hung, Christ made a promise to the tree.

"Because of your pity for My suffering," He said, "never again shall the dogwood tree grow large enough to be used for a Cross. Henceforth, it shall be slender, bent and twisted. Its blossoms shall be in the form of a Cross, with two long and two short petals.

"On the outer edge of each petal," Our Lord went on, "there shall appear the imprint of a nail, stained with red. And in the center of the flower, a crown of thorns."

Then Christ assured the flowering dogwood that it would be cherished and protected forever, as a reminder for all time of His agony and death on the Cross. And the legend tells us that ever since that first Good Friday, so many years ago, the dogwood tree has grown as prophesied.

Today, the flowering dogwood is hardly more than a good-size shrub. Its snow-white blossoms are, indeed, shaped in the form of a tiny Cross. The outer edge of each petal seems to be torn, as if by a nail, and it's stained with a rusty red. And in the center of the flower, one can see what might appear to be a yellow crown of thorns.

The beautiful legend of the flowering dogwood is especially known and loved here in New York State, where we have so many of these graceful little trees. The species grows abundantly in many parts of the State, but particularly on Long Island, Staten Island and in the Lower Hudson Valley.

The flowering dogwood has some economic value nowadays, although it is used mostly for landscaping and beautifying the countryside. But in Colonial times and even earlier the flowering dogwood had many practical uses. The Indians are said to have derived a scarlet dye from the roots which they used for coloring feathers. They also used the bark as a remedy for malaria—a practice that was repeated during the Civil War when quinine was in short supply in some of the southern states.

The pioneers who settled in this country had a rather peculiar use for the bark of the flowering dogwood. They used to soak it in whiskey before they took a drink, if they were feeling "out of sorts." And the flowering of the species was a signal for New England farmers to plant their Indian corn.

From the wood of this little tree, the early colonists often made hay forks, barrel hoops and wheel hubs. Today, it's the textile industry that uses the timber from flowering dogwoods. Because this wood is so smooth and never splinters, it is often fashioned into the shuttles that help to weave cloth.

As we can see, commercial uses of the dogwood have varied over the years, according to man's needs. This beautiful little tree has provided men with everything from scarlet dye and malaria remedies, to some of the tools for our modern textile industry. Even the bright red berries that cluster on its branches in the Fall serve a useful purpose by providing food for our song and game birds.

But most important of all to the people of New York State is the aesthetic value of the flowering dogwood, which blossoms into lacy white splendor in late April or early May; of all the signs of Spring, this is certainly one of the most cherished, a symbol of the priceless heritage of our trees. —ROSEMARY CLARKE, *Radio Bureau, N. Y. S. Dept. Commerce*

Leap year

1956 is Leap Year. What that has to do with conservation, we're not quite sure. But whatever the association, you'll have one more day to think about it.

The way it all came about is unraveled by Roberts Mann in a recent Nature Bulletin published by Illinois Forest Preserve District of Cook County. We reprint it as follows:

This is a Leap Year with 366 days instead of the usual 365, and 29 days in February. Julius Caesar was responsible for that. The Roman calendar was patterned after those of the ancient Greeks and Egyptians which, in turn, had been modelled on that of the early Sumerians in Babylonia. The Sumerians had 12 lunar months in a year but every so often, to make up for the difference between that year and the year of the natural seasons their astronomer-priests inserted an extra month.

The Roman year was too short. It had had only 365 days for so many centuries that their calendar was badly out of step with the seasons and something had to be done about it. The Summer months were coming in Spring. Caesar's astronomers told him the reason: Instead of being exactly 365 days long, a year was 365 and one-quarter days in length. Julius then solved the problem—so he thought—by establishing a leap year of 366 days every fourth year. He put the extra day in February because that was the last month on the old Roman calendar. Their new year started on the first day of March.

The Roman astronomers did not realize that they were just a little bit off in their calculations. We know now that twice a year, as the earth travels around the sun, it arrives at a point where its axis is perpendicular to a line drawn from the earth to the sun. That happens each Spring and Fall. The length of time from when that happens in Spring, until it happens again the next Spring, is called a "tropical" year. It contains 365 days, 5 hours, 48 minutes, and 46 seconds—11 minutes and 14 seconds less than 365¼ days. The seasons are always in step with the tropical year and our present calendar is based upon it.

About 1,500 years after Julius Caesar's reform of the calendar, that excess of 11 minutes and 14 seconds had added up to about 12 days. The Julian calendar had had 12 leap years too many! From observations of the sun, it was obvious that the calendar was out of step, so Pope Gregory XIII corrected it again. Under our Gregorian calendar, every fourth year is a leap year except those century years which are not divisible by 400. In other words, there was no leap year in 1900, 1800 nor 1700 but there will be one in

2000 A.D. Even this is not quite accurate and so, in the year 4000, it will be necessary to drop *another* day and there will be no leap year.

The Pope directed that 10 days be dropped from the calendar and that the day after October 4, 1582, should be October 15; also that each new year should begin on January 1. Until then, some countries began it on December 25 and some, as in England, on March 25. The Gregorian or New Style calendar was not adopted in England until 1752 and almost caused a revolution because it was necessary to drop 11 days. The people held great meetings and processions demanding: "Give us back our eleven days!" According to the Julian or Old Style calendar then in effect, George Washington was born on February 11, 1731, which corresponds to February 22, 1732, on our "New Style" calendar.

Many people have urged that our calendar be revised to have a year with 13 months of exactly 4 weeks each, and an extra day at the end—or 2 days in Leap Years. The Aztecs had a year with 18 months, each having 20 days, and 5 extra days—considered very unlucky—between years. Every 52 years they corrected their calendar and began a new "bundle" or cycle.

Reading one of their complicated but very accurate calendar "wheels," carved on stone, is like trying to read a gas meter.

Duck stamp money

If recommendations of the Budget Bureau of the House of Representatives are approved by Congress, the Fish and Wildlife Service will receive $2,735,400 in direct appropriations for operation and maintenance of the National Wildlife Refuges during the fiscal year 1956-57—a decided increase over their current year's appropriation for this purpose of $918,400.

The National Wildlife Federation, reporting on this phase of the budget hearings, points out that this shift was made necessary by the fact that a backlog of Duck Stamp funds—eaten away during recent years under a pretense of economizing—has been virtually exhausted. But if the shift to direct appropriations is approved by this Congress and continued in future years, it should mean more money in the future for acquisition of waterfowl areas. Such acquisition was the well-understood primary purpose for which the Duck Stamp law was passed in the first place.

Duck Stamp revenues, contributed at the rate of $2 per duck hunter, total about $4,300,000 annually. During the current fiscal year $1,070,000 of this has been programmed for refuge acquisition, but not all of it will be spent. Under the 1956-57 budget plans now getting the once-over by House sub-committees, only $1,000,000 has been programmed for refuge acquisition next year. Two reasons are cited by the Fish and Wildlife Service: (1) Exhaustion of the duck stamp money backlog, and (2) conservatism of the Migratory Bird Conservation Commission which frequently has refused to approve perchases for over $50 an acre.

The balance of current Duck Stamp revenues—the difference between $1,000,000 and $4,300,000 subtracting also the 15 per cent earmarked by law for administration and enforcement—presumably will be subject as before to expenditure in other Fish and Wildlife Service fields.

Roast goose

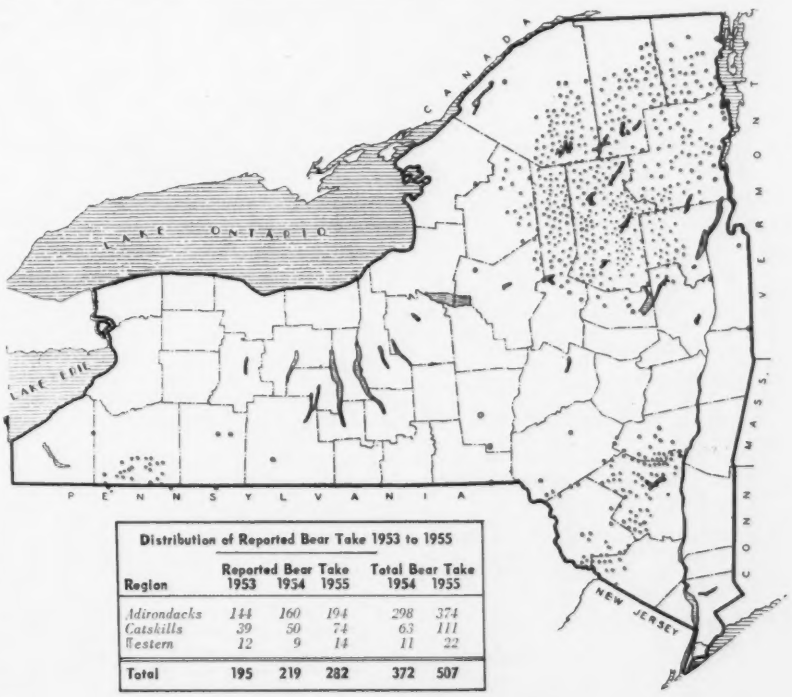
It's a well established fact that man, through carelessness, is his own worst enemy in starting forest fires. But fires do start from lightning and other natural causes, and every once in awhile freakishness plays a part.

Such was the case in Pennsylvania when a 25-acre fire was touched off by four wild geese. The geese, feeding in a corn field, were jumped by a fox. The geese took to the air, flew into and broke a high tension line which dropped to the ground, starting the fire. The geese, according to Pennsylvania Game Protector E. J. Fasching, were roasted.

Thinning work

The Berkshire Industrial School for Boys in Canaan, Columbia County, is continuing to thin plantations as marked by the Forester of District 12 (Rensselaer, Columbia, Schenectady, Albany, Greene counties). Two or three acres are marked at a time, and the work is done a few days a week in two or three-hour periods. The foreman fells and bucks the trees into posts with a chain saw; the boys limb and carry the posts out to the roadside.

It's a slow process, but at least needed thinning has been initiated and a useful product is being obtained.



Distribution of Reported Bear Take 1953 to 1955

Region	Reported Bear Take 1953	1954	1955	Total Bear Take 1954	1955
Adirondacks	*144*	*160*	*194*	*298*	*374*
Catskills	*39*	*50*	*74*	*63*	*111*
Western	*12*	*9*	*14*	*11*	*22*
Total	195	219	282	372	507

Black bear in New York

Bear hunters in New York State are few and far between, but despite that the bear kill is increasing—most of the animals being taken by surprised deer hunters.

The accompanying map prepared by Department game technicians shows the distribution of bear kills reported to the Department from 1953 to 1955. If you are a deer hunter this map should indicate areas of the State where you should be least surprised to meet up with a bear.

While the distribution pattern is clear, not all bear taken have been plotted on the map. Complete information is lacking because surveys disclose that only 55 to 60 per cent of hunters taking bear report their kill to the Department.

Answers to Forest Preserve Quiz

1. *False* There are many Forest Preserve properties outside the parks.
2. *True* The parks include both public and private lands.
3. (*b*) The Preserve is defined in Section 63, Sub. 1 of the Conservation Law.
4. *False* Most of the land within both parks is privately owned.
5. *False* 6. *5,000*
7. *True* The landowner may deny access.
8. *True*
9. *False* Sec. 54 1a: The Department may by regulation close any area of State land or restrict public activities thereon. (Such posting was necessitated by the blow-down in certain areas.)
10. *True* The Legislature may provide not exceeding 3 per cent of the Forest Preserve for such purposes.
11. *False*
12. *False* In accordance with opinions of the Attorney General, the Conservation Department may authorize limited cutting of living trees for Winter deer feeding, straightening roads.
13. *1 to 5%*
14. *True* A permit is required only for camping more than three days *in the same location, except at Lake George campsites.*
15. *True*
16. *False* The platform becomes the property of the State and may be used by others, under permit granted by the Department, when not in use by the builder.
17. *False* But camper may be held responsible if fire gets out of control.
18. *False* Regulation Art. 1, Sec. 1, Par. 3 permits use of wood from only dead and *down* trees for fuel.
19. *False* Regulation prohibits the erection of any tent within 150 feet of any spring or other source of water supply.
20. *False*
21. *False* No leases permitted under any circumstances.
22. *3 inches* Conservation Department may authorize removal with limbs attached for specific purposes. (For example, Christmas trees.)
23. *False* See below.
24. (*a*) Conservation Law requires that the Department maintain an approved fire protective system within the Fire Towns. These are specifically designated in another section of the Law.
25. (*b*) Conservation Law provides that the Department may establish by regulation a forest fire protective system in such areas outside the Fire Towns as it may deem necessary. These areas are known as Fire Districts.
26. *True* 27. *True*
28. *False* Several northern Adirondack towns are neither Fire Towns nor in Fire Districts. In such cases, Town Supervisors are responsible for fire protection.
29. *True*
30. *False* See Sec. 54 1a of the Conservation Law. Such closure is ordered *only* by proclamation of the Governor.
31. *True* They are appointed officers of the Department but are paid only for actual time spent in fighting fires.
32. *False* Permit required at all times to start fire for such purposes.
33. (*c*) First come, first served; no reservations for anybody.
34. *True* But permit may be renewed provided such renewal does not deprive other applicants of facilities.
35. *False* There are four campsites outside the parks.
36. (*d*) Department of Public Works.
37. *True*
38. *False* State Forests are production forests, owned by the State and actively managed by the Conservation Department. They are entirely distinct from the Forest Preserve, and are located outside the Adirondack and Catskill parks.
39. *False* Signs may be erected on property in connection with businesses conducted thereon, or in incorporated villages, or under written permit from the Conservation Department. No restrictions whatever in the Catskill park.
40. (*c*) 41. *False*
42. *False* While not all Forest Preserve lands are visible from a fire tower, the smoke which would be caused by a fire on these lands would be visible from one or more towers.
43. *True* To prevent the spread of forest insects, the Conservation Department may spray both State and private lands.
44. *False* The tent-like structure seen in trees is the work of the Eastern Tent Caterpillar.
45. *False* Governor's proclamation in the past has not forbidden conduct of business. It could prohibit all entrance into forest areas if deemed necessary.
46. *False* 47. *False* 48. *False*
49. *True* 50. *False*

Commercial fisheries an orphan?

Some 25 bills have thus far been introduced in the 84th Congress to transfer administration of commercial fisheries from the Department of Interior to the Department of Commerce.

At a time when there's real need to streamline the multiple and often contradictory administration of natural resource policy, such legislation appears to us to be a step in the wrong direction.

Giant pine

Entries are still being received in the Department's informal "big pine tree contest." Latest entrant, submitted by retired District Ranger Ernest W. Blue of Poland, is a late resident of Franklin County cut by one Kenneth Hunter on the Rockefeller preserve in November, 1925.

"King of the Adirondack Forests"

"Giant pine tree. largest ever grown in Northern New York, felled last week by Kenneth Hunter on the former William Rockefeller preserve at McDonald. The tree measured 18 feet, 2 inches in circumference, 72 inches in diameter."

The previous record white pine, reported on by E. W. Littlefield in the February-March, 1956 CONSERVATIONIST, grew south of Wanakena near the Oswegatchie River in St. Lawrence County. It was 14′ in circumference and 141′ high.

Souse-fisticated pigeons

The city-dwelling pigeon has finally met his match in the person of Joseph H. Fink of Skokie, Illinois.

According to *The New York World Telegram,* Fink, who is currently surveying the pigeon problem in New York City, is the inventor of a chemical concoction called "Roost-No-More" which, spread where pigeons normally roost, gives the birds a mild case of hotfoot. Fink explains the results tersely: "Poof; no more pigeons."

Fink says that the product, although non-toxic, non-inflammable, weatherproof and odorless, is most distressing to pigeons.

It's further reported that about the only successful rival of "Roost-No-More" was discovered in Hamilton, Ontario, where the city fathers spread whisky-soaked corn on rooftops. The pigeons got soused and staggered around until some one caught them. Or they tried to fly on one wing with disastrous results. But the Hamilton Chapter of the W.C.T.U. put an end to all that.

NEW YORK'S 1955 DEER KILL

FOR the second successive year deer hunters in New York set a new record last Fall in the number of buck deer taken. The reported take of 32,946 bucks exceeded the previous year's reported kill of bucks by more than 4,000.

Last year too, there were 15 central and western counties open for a one-day, deer-of-either-sex season, and hunters took a reported total of 13,102 antlerless deer, swelling the total reported State-wide kill to 46,048.

Even more impressive is the calculated total kill during the 1955 season—more than 59,500 deer. This discrepancy between reported and calculated kill (discussed last year in THE CONSERVATIONIST for April-May) arises each year because of the failure of about 25 per cent of successful deer hunters to report their kill to the Department.

During the 1955 season, as in the last several years, Department game research men, aided by Protectors, checked thousands of deer taken—in deer hunting camps, in transit on cars, at the deer check stations, in commercial freeze locker plants —to secure an adequate sample of the deer kill in each region of the State. This information was key-punched on I.B.M. cards and then compared with deer kill reports submitted to the Department. In this manner, a reporting ratio was secured for use as a correction factor in determining the calculated deer kill.

Though there was some variation, the 1955 ratio for reporting compared closely with that for previous years. It was found that in the Adirondacks 75.8 per cent of the successful deer hunters reported their kill. In the Catskills, 79.3 per cent reported, and in central and western counties, 77.0 per cent reported. These regional corrections were then applied to the reported kill by county and region to secure the calculated kill figures (see accompanying tables).

Of particular interest during 1955 was the one-day deer-of-either-sex season declared for 15 central and western counties of the State. These counties were also among the 29 Southern Zone counties where a two-day antlerless season was held in 1952, yet the herd had "bounded back" so vigorously as to necessitate a heavier harvest to reduce agricultural crop damage. The records of deer kill in these counties demonstrates the flourishing nature of the herd as accurately as do landowners' complaints of crop damage. During the 1952 deer-of-either-sex season, a total of 11,345 antlerless deer was reported taken. This year the total reported kill of antlerless deer in these same counties was 12,773. It should be noted, too, that in 1952 there was a two-day antlerless season; this past year, only a one-day season.

But what of the buck kill in these counties? Was it seriously affected by this harvest of doe deer? On this score the figures are even more eloquent: In 1952, the reported buck kill for these 15 counties was 6,642. Last year in *the same counties* the reported buck kill was 11,093.

—A. W. BROMLEY

ADIRONDACKS

Counties	Reported Take		Calculated Take		Total Take	
	Bucks	Antlerless	Bucks	Antlerless	Reported	Calculated
Clinton	150		198		150	
Essex	715	2	943		717	
Franklin	1,214	2	1,602		1,216	
Fulton (northern)	98		129		98	
Fulton (southern)	20		26		20	
Hamilton	1,381	4	1,822		1,385	
Herkimer (northern)	685	6	904		691	
Herkimer (southern)	55	1	73		56	
Jefferson	60		79		60	
Lewis	503	1	664		504	
Oneida (northern)	180	1	238		181	
Oneida (southern)	104		137		104	
Oswego (northern)	138		182		138	
Oswego (southern)	40		53		40	
St. Lawrence	1,596	2	2,106		1,598	
Saratoga (northern)	121		160		121	
Saratoga (southern)	27		36		27	
Warren	329	1	434		330	
Washington (northern)	123		162		123	
Washington (southern)	187	2	247		189	
County unknown	52		69		52	
ADIRONDACK TOTALS	7,778*	22	10,264	29	7,800	10,293

29 Antlerless Deer taken by archers in Adirondacks.

Calculated Buck take of 10,264 plus calculated, area-wide take of 29 Antlerless Deer by archers.

*Includes 11 Bucks taken by archers.

CATSKILLS

Counties	Reported Take		Calculated Take		Total Take	
	Bucks	Antlerless	Bucks	Antlerless	Reported	Calculated
Albany	274	6	345	8	280	353
Columbia	727	5	917	6	732	923
Delaware	1,798	13	2,267	16	1,811	2,283
Dutchess	894	10	1,127	13	904	1,140
Greene	732	4	923	5	736	928
Orange	746	7	940	9	753	949
Otsego	845	8	1,065	10	853	1,075
Putnam	475	9	599	11	484	610
Rensselaer	295	1	372	1	296	373
Rockland	163	7	206	9	170	215
Schenectady	64		81		64	81
Schoharie	508	8	641	10	516	651
Sullivan	2,302	21	2,902	27	2,323	2,929
Ulster	1,193	20	1,504	25	1,213	1,529
Westchester	53	71	67	90	124	157
County unknown	75		95		75	95
CATSKILLS TOTALS	11,144	190	14,051*	240**	11,334	14,291

* Includes 195 bucks taken by archers
** Taken by archers

CENTRAL AND WESTERN

Counties	Reported Take		Calculated Take		Total Take	
	Bucks	Antlerless	Bucks	Antlerless	Reported	Calculated
Allegany	1,283	1,605	1,666	2,084	2,888	3,750
Broome	810	866	1,052	1,125	1,676	2,177
Cattaraugus	1,396	1,405	1,813	1,824	2,801	3,637
Cayuga	283	394	367	512	677	879
Chautauqua	1,052	1,031	1,366	1,339	2,083	2,705
Chemung	565	663	734	861	1,228	1,595
Chenango	1,679	2,803	2,180	3,640	4,482	5,820
Cortland	508	650	660	844	1,158	1,504
Erie	437	316	567	410	753	977
Genesee	222	202	288	262	424	550
Livingston	487	506	632	657	993	1,289
Madison	449	5	583	6	454	589
Monroe	91	2	118	3	93	121
Niagara	83	38	108	49	121	157
Onondaga	262	161	340	209	423	549
Ontario	412	3	535	4	415	539
Orleans	122		159		122	159
Schuyler	330	3	429	4	333	433
Seneca	113	1	147	1	114	148
Steuben	1,590	1,711	2,065	2,222	3,301	4,287
Tioga	557	3	723	4	560	727
Tompkins	380	5	493	6	385	499
Wayne	150	2	195	3	152	198
Wyoming	436	422	566	548	858	1,114
Yates	256	3	332	4	259	336
Unknown	71	90	92	117	161	209
CENTRAL & WESTERN TOTALS	14,024	12,890	18,210*	16,738**	26,914	34,948

* Includes 226 bucks taken by archers
**16,500 by gunners, 238 by archers

STATE-WIDE TOTALS	32,946	13,102	42,525	17,007	46,048	59,532*

* Includes 939 taken by archers (432 bucks, 507 antlerless deer)

The well-dressed archer

Take to the hills boys—The Martians have arrived. Actually, this is not an archer from outer space but "Fletcher Cockfeather" (Bruce Madlen) of the Shirttail Archers of Hudson.

"Fletcher" is being congratulated by Sedge Sedgewick of Pittsfield's (Mass.), WMGT-TV on his "get-up" of what the well-dressed archer will wear. The occasion was the annual dinner of the Hudson Fish and Game Club where the archery members meet to slash off the shirttails of those who shot at deer and missed during the season.

The lumber industry

From "Trends in the Northeastern Lumber Industry," an article written by Fred C. Simmons of the Northeastern Forest Experiment Station and appearing in the March issue of *The Northeastern Logger*. we garner interesting information on what's taking place in the sawmill industry. New York is included in the Northeast in Simmon's article. He sums it up like this:

"The trends observed in this study are generally believed to be healthy ones. They show the Northeastern sawmill operators are adapting their production facilities to today's conditions. They are setting up their mills in permanent locations to provide better living conditions for their workers, and to gear their facilities better to the supplies of raw material available and to the markets to which they cater. They are getting more and more into additional processing of their products (particularly of the lower grades) to make them more salable. This further processing of the mill's product provides more work for local people and contributes to the stability of the local economy. It is believed that these trends will continue."

THIS CASE IS NOT CLOSED

ON January 7, of this year, at about 5 P. M., Game Protectors Chester Marciniec and Marcus Putnam were on partol in the Town of Charleston in Montgomery County. They heard shots. Investigating, they at length caught up with a car in which were John Menech, Jr. and George Negrich, Jr., 39 and 28 years old, respectively, both of the Town of Broadalbin. Also in the car were three freshly-killed deer (still warm and not yet dressed out), two rifles, two shotguns and two revolvers.

Protectors Marciniec and Putnam arrested the men and took them, along with the evidence, before Justice of the Peace Gordon Humphrey of Burtonsville. Both Menech and Negrich were charged with a violation of Section 170 of the Conservation Law: "Taking and transporting three wild deer during the closed season without a license or permit to do so." Both posted bail ($500 each) and were held for action by the Montgomery County Grand Jury, which subsequently indicted them.

Following indictment by the Grand Jury, the case of Menech and Negrich came before Supreme Court Judge Felix Aulisi, of Amsterdam. Judge Aulisi sentenced the defendents — both of whom pleaded guilty—to one year in Onondaga Penetentiary, but immediately suspended execution of the sentence. The defendants, however, were ordered by the court to be placed on probation for one year, during which time they were not to go hunting or go out in the field with anyone else hunting.

This case, and particularly the disposition of it by the Court, attracted much attention both locally and State-wide; the feeling of the public, as expressed in local newspapers and in many letters to this Department, very definitely appears to be that Menech and Negrich "got off easy," especially since it was known to the Court that Negrich had settled with this Department, in the amount of $102.50, for a previous deer killing violation.

The case of Menech and Negrich, however, is not closed. In their reports to District Game Protector DuCuennois of the Glen Falls Division, Protectors Marciniec and Putnam recommended that the Conservation Department institute a penalty action against the violators, aimed at recovering $700 (the maximum allowed by law) from each. These recommendations were approved and forwarded to Albany; penalty action has been instituted.

The Conservation Department has one other weapon to use: Revocation of licenses. The Superintendent of the Bureau of Law Enforcement has recommended to the Commissioner that such revocation be made for the maximum period permitted by law—five years—for both Menech and Negrich.

February fire

While it is not unusual to have an occasional forest fire reported during the Winter months on Long Island or in the Lower Hudson Valley, a fire in the Adirondacks in February—with snow covering the ground and temperatures below zero—is one for the books.

The smouldering sawdust pile shown in the photographs here was discovered by Rangers Halsey Page and James Lawrence on February 23, 1956, while on their way to inspect a logging job. This sawdust pile, which is located about six miles northeast of Speculator on Big Range Mountain, was left there several years ago by a portable mill long since moved out. There is no way of telling how long it has been smouldering.

Because it is located in a remote area of high fire hazard (due to adjacent unsalvaged blow-down) a bulldozer was hired from the Novosel Lumber Company to level it off in the hope that it would be completely extinguished by water from melting snow and Spring rains before the Spring fire season comes along.

It will be inspected again before then, and will be under constant observation from Pillsbury and Hamilton Mountain towers during the Summer.

Cornell's "New Campus"

At Shackelton Point, on the south shore of Oneida Lake, Cornell University has a "new campus," the 400-acre Brown estate, acquired through the generosity of the late Charles S. Brown and Mrs. Brown. The University has recognized the unusual possibilities of this area as a center for research and education in conservation and the biological sciences and last Summer asked us to administer and develop the area for this purpose.

Ultimately we hope to be able to hold regular conservation and biology classes at Shackelton Point. In the meantime we are using available resources to develop the area's potentialities in these fields, and to conduct a variety of studies. It will, of course, be extremely helpful when a teaching program is initiated, to have the background of research which we are now planning. Dr. Edward C. Raney, Professor of Zoology and Fishery Biology in the Department of Conservation, will direct the scientific program and an advisory committee representing several biological departments within the University will assure that the great variety of possibilties will be exploited.

During 1955 a graduate student, Maurice Zardus, spent the entire Summer at the Point, making preliminary studies of the animal and plant life. Among the especially interesting birds Mr. Zardus studied were a nesting colony of common terns, a pair of bald eagles, and a group of American egrets. Mr. Zardus began a collection of the varieties of plants found on the area and in Oneida Lake nearby. A number of other University biologists visited the area for briefer periods to make preliminary studies in their particular specialized fields.

Oneida is such an exceptionally productive lake that studies of its fisheries and limnology will be of very special interest. An important fisheries investigation, pointed particularly at walleyed pike and bass, will begin this year. The State Conservation Department is contracting with the University to conduct the research with the support of a Federal Aid (Dingell-Johnson) project. The puzzle of the remarkable fluctuation in the walleye fishing in Oneida is of course one of the main subjects of the study. With 1954 being one of the poorest years and 1955 one of the best years for walleye fishing in recent time, the stage is nicely set for such a study!

The land area of the estate is mostly low-lying—only a few feet above the normal level of the lake—and a good deal of it is flooded during high water periods. Ben Bradley of the New York State Conservation Department and his associates in the wildlife habitat improvement project (P-R 48-D), have surveyed suitable sites for wildlife ponds and constructed two late last Fall. Additional ponds are scheduled for 1956. The ponds are to be used for experimental plantings of waterfowl food plants, and other study projects.

The University has granted the State Conservation Department permission to develop a public fishing access point at the east end of the property, about two miles east of Bridgeport. It is anticipated that this will aid the fishery studies to be conducted by the University by providing a point at which fishermen can easily be contacted for creel checks.

One study begun in the Fall of 1955 involved the trapping and banding of ducks (particularly diving ducks) to determine their exact migration route and hunting pressure. The strong off-shore winds which were so general last Fall interfered with the work, but about 250 bluebills, blacks, and mallards were banded, and a few returns are coming in through the U. S. Fish and Wildlife Service. The Point is in line with a Spring migration route of Canada geese, and we have planted a field of rye to attract them. And during the Spring of 1956 a number of trees and shrubs will be planted, beginning a long-term wildlife habitat development plan.

Some of the research planned for the new "Cornell University Biological Field Station," as it is to be called, will be of a basic "pure science" nature, while other studies will be designed to make better use of our natural resources—including promotion of better hunting and fishing.

—GUSTAV SWANSON,
Head, Cornell Dept. of Conservation

Maple products note

The following is taken from a recent report made by our Department of Agriculture and Markets, and relates to the article on the sugar maple in this issue. Figures apply to the 1955 season:

Last year there were approximately 1,694,000 trees tapped in New York State. This was a 1 per cent decline in number tapped; however, syrup production increased 22 per cent with 461,000 gallons of syrup made and 37,000 lbs. of sugar produced. The average price for syrup last year was $4.40 per gallon and sugar was 94¢ per lb.

The 1955 maple season in western and central counties got off to an early start and in the northern counties started about March 1. Weather conditions in western and central counties were favorable and runs, although not too heavy, were long and sap was sweeter. In northern counties weather conditions were not as favorable, but some heavy runs were reported and syrup production was very satisfactory.

Landowner—sportsmen

Sportsmen up Utica way, many of them members of the Trenton Fish and Game Club, know a good thing when they have it. In this case West Canada Creek —one of the outstanding trout streams in the State. Showing that they are appreciative of their good fortune—and intend to keep things that way through conscientious recognition of the landowners' rights—the Trenton Club, last season, prepared printed folders (see below) for insertion under windshield wipers on cars of visiting fishermen in that area.

We learn, with no surprise, that farmers along the West Canada are very appreciative of the Club's idea.

"Fine, We Hope! But good or not, we are all lucky to have abundant local streams and lakes to fish. Let's stay lucky by respecting the Farmer and Home Owner and their property.

"Following is a short listing of things that we the sportsmen can do to show our appreciation to neighboring property owners for their courtesies:

"Whenever possible, request permission to cross private lands.

"Be careful not to damage fences and planted fields or leave farm gates open.

"Please park at a favorable distance away from private dwellings and avoid early morning noise.

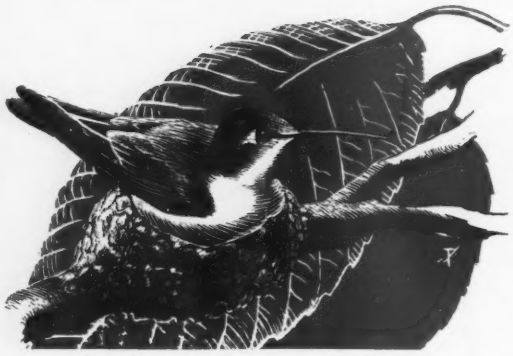
"Do not build fires on private property.

"Please do not litter the area around your car with bottles, cans or papers—especially this pamphlet!

"Do you belong to an organized Sportsmen's Group?

"We are trying to improve your fishing! Are you?

"TRENTON FISH AND GAME CLUB, INC."



Letters to The Editor

Ranger Marleau

Dear Sir: Last November while hunting in the wilderness area out of Big Moose, my partner was lost for three days.

I contacted your Forest Ranger, William Marleau, at Big Moose, and he at once took over the search for him. He worked continuously all of the time until my partner was located, and without one word of complaint.

On the third day four State Troopers were sent to help with the search and although it was broadcast over television and radio and was in all of the papers, Bill did not even get mentioned. As your readers are for the most part hunters, fishermen and sportsmen I wish you would publish this to let them know that William Marleau is a real gentleman and sportsman and in my book he is *tops.*

P. G. Chrispell, Sherburne

Surveying the scene

Dear Sir: My husband is a land surveyor, and I too carry the tape and line rod, and sometimes run the "gun" while he cuts brush on a thick line. You'll appreciate what I mean when I say that our stamping ground is the Catskills—Greene, Delaware, Schoharie and Albany counties, with side trips into Otsego, Sullivan, Montgomery and a number of others. He and I both enjoyed articles by the late Al. King, and I hope he's carrying chain and running lines in the stars, where there are no lost lot lines, lost witness trees, or hills so steep that they are, as he once said, "Places where only a fool or a land surveyor" would go.

Al. King knew the kind of surveying we do; old patent lines, old lot lines, marked with blazed trees. Yet Al. was luckier than we; there are, in the Adirondacks, still a few of those old forest giants marked by the axes of the first surveyors. In the Catskills, they have been cut off; only a rotted root or a pile of stones with a rotted stake in the middle remain.

I do want to put in my two cents about that touchy deer question.

There are many deer on our land; for years we didn't post, then the hunters got so thick and so overbearing in their ways that we had to do it. We tried charging a one dollar fee for a permit to hunt our lands for the full season. Worked fine for two or three years, and we met some fine sportsmen who were glad to pay for the privilege they enjoyed. It covered the cost of posting and labor and some light damage. Last Fall, however, the gentlemen paid, while the tin-horns began sneaking in on the back lines. The cheap ones walked up to the house, read the sign, then had the nerve to ask to hunt for nothing, because "I'm only here for the day." We shall post more fully next year, and if necessary, make an example of the sneaks. After all, I do have a bullet that hit the house, and I have heard the whine of bullets over my head, though this is a shotgun county. The answer? Educate the hunters to respect the rights of landowners. After all, we wouldn't expect to stage a picnic complete with campfire and paper plates in *their* front dooryards!

About that doe season, yes, do have one. But issue a local license to shoot one deer of either sex to bona fide landowners in their own townships. Let the farmer or local hunter take his choice; a lot of us locals would like a deer just for the meat, and doe meat is better anyway. Once a farmer gets his deer, he's through for that year. Most of us could get a doe on our own farms if permitted. There are plenty of does, for we see them constantly.

Mrs. A. S. Harrington, Gilboa

La Dolce case

Dear Sir: I read with interest the account given of the La Dolce case in the last issue of THE CONSERVATIONIST. Anybody will admit that the Judge acted mildly for such a crime; 60 days in jail would have been better and more convincing for Mr. La Dolce.

But I have to take off my hat to Mr. La Dolce for having taken the whole blame; the others were surely as guilty as he was. Mr. La Dolce is surely quite a guy and should be given another chance to practice his favorite sport, because a man of that calibre can become a very fine sportsman.

Louis J. Rabetaud, New York

• We don't agree. La Dolce made it possible for others to avoid prosecution. We don't see how such action benefits the cause of conservation.—Editor

Turkey stocking

Dear Editor: With much interest I read your article about wild turkey plantings. I wonder if you are aware that turkeys were released in Allegany County in 1941.

I was a Foreman in a Civilian Conservation Camp at West Almond from 1934 until 1942, which was in District Forester I. S. Bowlby's District of Bath, N. Y. The Andover Rod & Gun Club bought 50 turkey eggs from a private game farm in Wisconsin. These were hatched, and I raised 19. The following year, 1941, I raised 243 from the 1940 stock. These birds were distributed by Andover, Almond and Canaseraga clubs. The before mentioned clubs furnished the feed and equipment to raise the birds. I have checked with hunters in Allegany County who claim there has been a limited number of turkeys in evidence ever since.

I made a private planting of 2 pair of mature birds (1 yr. old) near the State lands in the Western part of Yates County 1942. From these I have seen evidence there are still some around.

Letchworth Park received a pair of the original stock. Most of the turkeys were released in groups of 15 and were fed until they stopped coming back. Some of the yearlings were released with each group.

Allen S. McMinn, Branchport

Dear Sirs: I was reading your article on "More About Wild Turkeys" and feel it is my duty to pass this information on to you.

My father owns a farm in Broome County just outside of Deposit, N. Y. on Route 41. We use this farm for recreation in the Summer and hunting in the Fall. During the recent deer hunting season in Broome County, my brother and I observed a wild turkey through my binoculars on the second day of the season; on the third day of the season we did not see one, but we heard it. These instances took place between our farm and the "Marsh Pond" area on State property.

Elmer V. Strubel,
Butler, N. J.

• Thanks. We're interested in all reports of wild turkey sighting and "hearings."—Editor

Blue Mt. Lake House

Gentlemen: The December-January issue carried an article by Roland B. Miller entitled "Adirondack Hotels." I enclose one of the pictures from this article which intrigued me. (Photo of Blue Mt. Lake House.)

From 1905 to about 1934, I spent every Summer at Blue Mt. Lake. The log cabin and the building directly behind the four story building in the foreground are obviously Merwin's log cabin and the Blue Mt. House, while the four-story building is the original Holland House which burned early in the 1900s. The background terrain is clearly the site of the Holland House which is near the present Blue Mt. Lake House and cabins, but the Blue Mt. House and cabin belong a mile more distant on their hilltop site.

R. H. Williams Stamford Conn.

Dear Sirs: In regard to the picture in upper left hand corner of page 8 in your December-January issue: I lived a good share of my life at Merwin Blue Mt. House and have seen a number of pictures of the place. But never one that looked like this.

The Blue Mt. Lake House was a different place and was located near the lake near where "Potters" cottage colony is now.

Mrs. Russell Merwin, Indian Lake

• *Mr. Harold S. Hochschild has also called attention to the picture identifying the old hotel as Holland's Blue Mountain House. Similarities between names of the early Blue Mountain Lake hotels, are, admittedly, confusing. We identified it as an early Blue Mountain House; where we erred, as we informed Mr. Hochschild, was in identifying the cabin at the left as Merwin's. Here again, similarity of Adirondack structures threw me off base. My apologies to the Merwins.—Roland B. Miller*

Dear Sir: Your December-January number is sure a fine one and I like your magazine the best of them all. On page 8 you show a picture at the upper corner of the page with the writing, "An early Blue Mt. Lake House. Last was razed this Summer for Museum. Merwin's cabin at left will hold hunting and trapping exhibit." This picture we do not think is of the Merwin Place, but of the old Holland House which was on a site across the road from what is now "Potters'."

I have been in picture line of business in Central Adirondacks since 1909 and have quite an extensive catalog of Adirondack scenes, probably several thousand negatives of all sizes. These I use to make hand colored views for sale to Summer folks each season.

Thanking you for getting up a magazine for which I am eagerly awaiting every issue.

Frederick A. Hodges, Utica

• *See our explanation above.—R.B.M.*

From Greenland's icy mountains

Sir: It's sure good to have our fine magazine away up here in Soudrestronifjord, Greenland.

Major Myron D. Keefe,
6621st Air Base Group,
APO 121, New York, N. Y.

Bath hatchery fire

Dear Sir: I am enclosing a few pictures which, though rather late, might be of some interest to you. They are of the Bath Fish Hatchery fire, which took place on a very cold December 21st morning. Living next to the hatchery gave me the chance to take quite a few pictures of the fire.

The fire in a sense was a personal loss to my family, because my father, Roy Edsall (now retired) was employed there for forty-one years. It just didn't seem possible that so large a building, that had stood there for so many years, could be destroyed in such a short time.

Miss Eileen Edsall, Bath

One mouth too many

When a fish opens its mouth it often gets caught. When a fish has two mouths, the hazard is doubled. Here's the evidence of the latter. Frank Kilmer, says the Binghamton Press, came up with this most unusual catch—a two-mouthed blue-gill, making the haul while fishing the Delaware River. He hooked the monstrosity in the lower mouth.

Dear Sir: In addition to the enclosed photo of the blue-gill (which is self explanatory as to source, etc.) I thought it might be of interest to mention that I shot a cottontail this Fall that was equipped with 3 kidneys, one on the left side and two kidneys attached to one another on the right side.

David L. Wood, Syracuse

"Swaintabs"

Dear Mr. Fosburgh: We wish to express our appreciation for your answers in the THE CONSERVATIONIST to those people who have asked where they might obtain "Swaintabs." Due to these answers and to the excellent article by Dave Cook in the June-July, 1955 issue, we have had orders come in from all over the country.

We can tell the orders which come from readers of THE CONSERVATIONIST because this is the only place where our product has been called "Swaintabs." We think this name is very appropriate, as the tabs were developed by Professor Swain. However, in all our advertising circulars we have referred to them as F. L. TABS.

There is one correction which we would like to make to your listing of our prices. In orders of one thousand to nine thousand Tabs our price is $5.50 per thousand, and in orders of ten thousand or more the price is $5 per thousand. Also, these Tabs are not mailable and consequently we are obliged to ship them by R. R. Express, *Collect.*

We believe that the Tab Tool (which we also manufacture) is the best possible implement for inserting the Tabs into the trees.

Again our thanks for your co-operation.

H. L. Smith, Manager,
Forest Lab Associates,
Exeter, N. H.

• *It seems that some of our subscribers are really going in for silviculture. That's good. And if its good for Forest Lab Associates, too, so much the better.—Editor*

Tupper Lake House

Dear Editor: It was a surprise to open the December-January issue and see the picture of Alembert Corey's (my father) hotel on page 8. We have the same photo and I remember my mother saying that one of the men in the boats was Luke Evans* of Saranac Lake, a guide, and presumably the one rowing in the foreground, but I don't really remember.

The caption speaks of these two buildings as "Tupper Lake House" and that was true of the farther building in the picture. The building at the right was the famous "Club House"—if it had another name I never heard it—owned by a group of New York men and operated by my father for them. Tupper Lake House was formerly known as McClure's, but the name was changed when it came into my father's hands. The little log house between these two buildings was the "little dining room," used out of season.

Your article speaks of trout and venison on the menus of these old hotels. *In season* the word venison appeared. At other times it was called mountain lamb, and as near as I can make out it was always on the menu under one name or the other. President Cleveland spent his honeymoon there and when his daughter, Marian, was born the following year all the babies for miles around were named Marian, including me.

Why I am writing to you is to ask where this photo was found, and was there a picture of Jesse Corey's Rustic Lodge in this collection? We have no picture of this, my grandfather's, hotel and would like to find one. Though quite famous, Rustic Lodge was on the outside so backwoods looking that anyone turning over the photos would be impressed. Inside, however, it was a different story with its big roaring fireplaces, mounted heads of deer and bear looking down from the walls, and rugs of deer, bear and fox skins covering the floors. The Rustic was situated on Upper Saranac Lake where there is now a small village known as Corey's. Alfred Donaldson in his "A History of The Adirondacks," Vol. I, Page 23, describes the Rustic Lodge as follows:

"So ended the long career of one of the most modest but best loved resorts in the mountains. Rustic Lodge was a most unpretentious looking place built long and low of squared logs chinked with plaster in the most primitive style. But there was no spot more dear to the heart of its patrons and none that radiated a finer spirit of good cheer and woodsy brotherhood. It was built by Jesse Corey in 1850."

Marian Corey, Bridgewater, Conn.

* Luke Evans' wife ran a small inn in Saranac Lake, patronized by distinguished people, and the cooking was such that no one who could get into the Evans House would think of patronizing the two big hotels that stood at either end of Main Street. It was to this house that Dr. Edward Trudeau came on his first visit to Saranac Lake. John D. Rockefeller was also one of the guests. He was not giving away ten cent pieces at that time, but big red apples. And at that time, my father's hotel having burned to the ground, my sister Maude and I were living with an aunt across the street. We and my sister's chum, Gertrude Evans, always knew that Mr. Rockefeller had a present for us when he came. He would hold his hands behind his back and we would choose expecting nothing less than a doll carriage. I hope our faces looked all right when we thanked him for the apples, but we did have lots of big red apples of our own, down in the cellar in a barrel.

• *Sorry but we don't know of any photograph of Jesse Corey's Rustic Lodge. But perhaps one of our subscribers could help out.—Editor*

Nut trees

Dear Sir: "American Chestnut, formerly a staple diet item" (excerpt from More About Wild Turkeys, December-January, 1955-56 CONSERVATIONIST) spurs me, as an amateur member of the Northern Nut Growers' Association, to urge the promotion of a "Hardy Nut" Reforesting Program.

Hardy Persian and Carpathian walnuts, commonly but incorrectly called English, the equal of any of the West Coast produces, are being grown in many parts of New York State. Chinese chestnuts and blight resistant hybrids (American-Chinese-Japanese crosses) are available and good crops are being harvested.

Geneva Experiment Station has several worthwhile varieties of filberts. Several excellent named varieties of butter nuts, black walnuts and hickories are available. Heart Nuts are being grown very successfully. Seedlings of any of these produce worthwhile trees and nuts. Hazel nut seedlings for wildlife projects, as you know, are available from the Department.

Pennsylvania has stands of blight-resistant chestnuts old enough to produce substantial crops. Deer fight for them, grouse love them and turkeys—just imagine a wild turkey all stuffed with chestnut dressing!

Walnuts (Persian), chestnuts, filberts, hickories, black walnuts and heart nuts along fence lines, corners and slopes not suitable for field crops would go far as additional food for wildlife. Why wait until the U.S.D.A. produces the perfect hybrid chestnut?

Let's sell this program now and in ten years or less we will have crops worth talking about. Let our State nurseries start growing seedlings for distribution. Seed nuts with planting instructions should be made available.

Walter E. Paine, Rochester

• *Your suggestion that we foster a nut tree and shrub planting program to a greater extent than in the past is well taken. We have not done as much as we might toward stimulating nut tree growing. You make reference to the fact that we now distribute hazelnut seedlings. These are raised at our Painted Post Nursery from American hazelnut seed gathered in the wild. We have arrangements with the Geneva Experiment Station to purchase at nominal cost most of the hybrid fruit from their filbert orchard. Unfortunately, this past year there was a crop failure so this year's nursery inventory doesn't include any filberts.*

We have discussed with Professor George L. Slate of the Geneva Experiment Station, who has a strong personal interest in the nut trees, the growing of superior varieties of hickories and walnuts at our Painted Post Nursery. He has expressed a desire to have us do this and I know we can count on his active co-operation. People like you who know of the location of superior types of nut trees can help us to propagate superior trees for distribution.

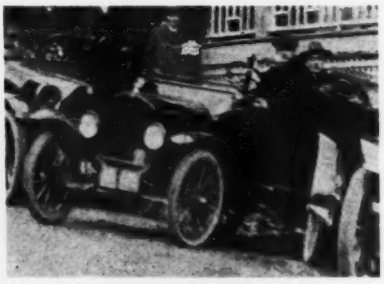
Needless to say we welcomed your letter, and would like to suggest that you discuss your ideas also with Mr. Robert Perry, the District Game Manager at our Scottsville office. If there are opportunities to carry on seed collections in your vicinity, his staff can carry through on this.—Arthur W. Holweg

Steady, now

Gentlemen: I am a steady reader of THE CONSERVATIONIST and received my copy a few days ago.

It's about time you wrote something good in it. Your November and October issue was no damn good. But the December and January issue is very interesting. Keep up the good work.

A Steady Reader, Poughkeepsie



Vintage Ford

Dear Pete: My confidence in you and your splendid magazine is going to slip unless you tell me what kind of magic the photographer used to persuade that 1917 model T Ford to pose for a picture in 1912. I had one exactly like it. (Page 10, December-January issue, Wells House, Pottersville, N. Y.)

Happy New Year to you and the staff.

Jack Hadley, Westport

• *Mrs. O'Connell says that when she and her husband took over the Wells House in 1928, they found this photograph in the cellar. On the back of it was written the date: 1912. Is that you in the front seat?—P. W. F.*

Dear Sir: Just to satisfy my curiosity, isn't that a 1917 Ford in the picture at the bottom of page 10 in your December-January CONSERVATIONIST?

Clyde F. Mosher, Albany

Snow fleas

Dear Sir: Last week end, while tramping around the woods near Luzerne, we noticed tiny black specks on the clean snow. Upon closer examination we noticed that they were alive and jumped around. Somebody said they were "snowfleas." Can you tell us what they are, where they come from—and any other information?

We always read your magazine from cover to cover.

Mrs. W. D. Egnor, Schenectady

• *Years ago, in doing research for a series of articles on Verplanck Colvin, who as State Land Surveyor probably did more than any one else in giving the vast Adirondack region its proper meets and bounds, we made copious notes. Turning to these we found reference to "snow fleas," with year and page number. So, from Colvin's Report, 1874-1879, in the Narrative of 1876, under date of October 17:*

"Descending, after a brief march, we reached North Creek, a beautiful little stream, which the Beaver River guides accompanying us assured me came from a chain of ponds to the northward. If this proved true, it would be an interesting discovery, and was extremely probable as the old maps did not even indicate the presence of a stream here. The day was warmer, the sky clear of clouds, and the pocket barometer rising 0.020 since last night, we were cheered with the prospect of fair weather. On one of the snowy slopes in the forest, fronting the sun, I was interested by the sight of the snow fairly covered with a small black insect, the podura *or 'snow flea.' These singular winter insects, the guides assert, are sure indications of a thaw. Is not this a wonderful region, indeed, where insects sport upon the snow!"*

The podura *is a genus of small leaping insects; suborder Collembola, having cylindrical body. It is the type of the family* poduridae, *including the snow fleas and springtails. —R. B. M.*

Abnormal growth

Dear Sir: Information is requested in regard to an abnormal growth observed on a deer at Seneca Ordnance Depot, Romulus, N. Y., on March 1, 1956.

The deer had two or three large pendulant growths of approximately 4" in diameter attached to the side of the head just behind and below the mouth. The deer was running aimlessly in contrast to other deer, which were browsing along the roadside.

Ernest G. DeGraw, Ovid

• *The animal you describe apparently has a papilloma. It is a form of skin tumor which is rare in deer and seldom causes death. The growths do become so large as to mechanically obstruct vision, breathing and sometimes eating. In such cases the growths are over the face, eyelids and edges of the mouth. Sometimes these tumor-like growths become bruised or lacerated and become infected; when this happens a toxemia may develop from the absorption of bacterial poisons, and such poisons may cause the death of the deer.*

The initial cause of these tumor-like growths on deer is not understood. We see or hear of possibly a half dozen cases a year. Somewhat similar growths occur in cattle and veterinary research men have developed a serum injection which will cause the shedding of these growths in cattle.

I would suggest that this deer be killed by an agent of the Department and the carcass burned. We are not certain whether the causative agent in deer is transmittible, and disposing of the animal will assure the least possibility of transmission.—C. W. Severinghaus.

Wood duck nest boxes

Gentlemen: After trying for a year to find someone that could supply wood duck houses for me I have finally found an excellent supplier. The house is according to your specifications and the front and roof are tinned to keep out animals. It is made of cypress and the cost is nominal. Am very excited about this as we have six small lakes —the largest is one acre, and I love to see ducks and geese swimming on the water.

You do such a wonderful job of informing people about things in nature, I know there are hundreds like us that would be grateful for this information. The company is R. F. Napoli, 1529 White Plains Road, New York 62, N. Y.

We have bought several bird houses from the above and the workmanship is excellent, the wood heavy and durable, and the price very low. Do mention this in your fine magazine. We sure enjoy it.

Mrs. Chares N. Aronson, Arcade

Dear Sir: In regards to the article in December-January issue of THE CONSERVATIONIST on wood duck nesting boxes, I wish to make it known that I make the wood duck nesting boxes to N. Y. S. Conservation plans, and can supply them in any number.

Hoping to give the wood duck a nest.

Austin A. Weiler, Akron, N. Y.

White pine

Dear Sir: I read in THE CONSERVATIONIST of February-March, 1956 about the big white pine growing near the Oswegatchie River, South of Wanakena, New York (on page 43). I enclose a snapshot of the big pine taken after the 1950 blow-down. This pine is 6 feet in diameter.

Ray S. Barden, Antwerp

Browse line?

Gentlemen: I am inclosing a Kodachrome slide of a lake in Quebec. The shore line is mostly small cedar from which all of the greenery is gone to a height of about five feet above normal water level. Alder patches that reach the lake shore are fully leaved in Summer in contrast with the barren cedars.

This lake is small, one of several small lakes which belong to a private club. I arrived there as a guest and in no time became involved in an argument as to the cause of this shore line business. Every one said that ice caused it. I agreed that ice helps; it makes a macadam highway for Nature's white-tailed hedge clipping crew, and that's all.

I am at the bottom of the guest list until I prove my position or apologize.

Max H. Olney, Westernville

• *From where we sit, this looks like a deer browse line. If ice did it, the trees along the shore would be heavily scarred.—Editor*

Horned owl vs ducks

Dear Sir: "The Case of the Missing Ducklings" (Mr. Wilcox's letter, page 42, December-January issue):

We here would consider the horned owl as a very likely culprit in the disappearance of a brood of ducks. On any enclosed water, ducks are at the mercy of a horned owl. Once on the wing they are safe, but the owl will take them either off the water or as they jump. In these parts, horned owls are very destructive, taking both black and wood duck. They also destroy gulls.

The horned owl's trade mark is the claw mark—a minute puncture of the skull. The owls seem to take the mother duck first, perhaps because she offers the most profitable target. Her disappearance leaves the brood open to future attack.

A. W. Smith, Ipswich, Mass.

• *Could be. But even ducks in flight are not safe; we once saw a horned owl take an almost full grown mallard in mid-air.—Editor*

Those pale inks

Dear Editor: If I would not be presuming, and with apologies, I suggest you do not use yellow ink in your wonderful magazine. As for instance in the August-September issue, pages 10-11, the small print. It's difficult to read. Your colored illustrations are works of art, wonderful. Your illustrations of birds seldom equalled.

Carl F. Walk, Indianapolis, Ind.

• *You're not presuming, and no apologies needed. You've got a point.—Editor*

Thanksgiving

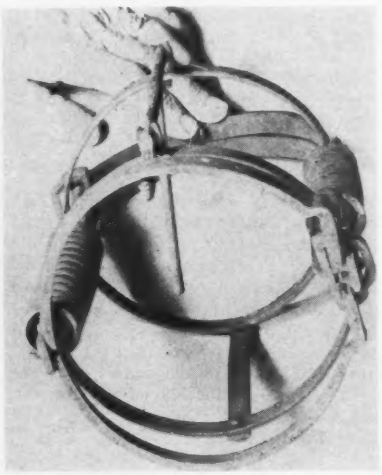
Dear Sir: Some of the letters you print in the Back of the Book make my blood boil.

As for the idea of Thanksgiving Day being set aside for families to join with their loved ones in a festival of gratefulness for their many blessings, my dictionary has a different definition: "Thanksgiving Day — A day, usually the last Thursday of November, set apart for thanksgiving and praise to God." It doesn't say anything about loved ones joining together, etc. That's just a selfish desire on the woman's part, from the way I look at it.

I don't even try to stop my husband from hunting on Thanksgiving Day. As a matter of fact, Thanksgiving Day of 1954, my husband came home with a beautiful 8-point buck (the head of which we had mounted). It certainly makes me feel good to have him compare me with the wives who refuse to let their husbands out of the house that day. What good is Thanksgiving Day if there is ill feeling between the husband and wife?

As for my comment on the Conservation Department, can you imagine what a hell of a mess this State would be in without you?

Bertha Kenyon, Northville



Skunk trap

Dear Editor: Thumbing through the pages of your February-March issue, I came upon the article on page 36 with its picture—"A Trap But for What."

Did I ever see a trap like this? Yes, many times. This is not a trap for kids. It's a man's trap and can be very dangerous. I have always called it the Sabo trap. When new and set you could take a broom handle to spring it, and I have seen it chop the handle half in two — so you just wouldn't want your arm in there. Back about 1918 my father acquired two or three dozen of these traps through an advertisement, I believe in The Rural New Yorker, but I am not sure. This trap proved to be very successful in trapping skunks. You could set the trap in holes or dig a hole in a bank. Be sure to throw bait in hole first, then set trap in entrance with large flat stones at sides to form a tunnel just so a dog wouldn't get in the trap.

The beautiful thing about this trap was that when a skunk got in it there was no stink, but you got your fur. Those were the days when pelts were worth trapping. I believe they sold for 6 to 8 dollars for half stripes and 8 to 12 dollars for black skunk.

But this trap did not prove to be good for anything else.

E. J. Jorgensen, Milford

Thoughts on antler size

Dear Editor: I have just read the articles "The Growth of The Deer Antler" and "The Adirondack Coyote" in your February-March issue. I am very interested in both of these articles, and after talking with a man who had a part interest in a hunting lodge in Canada, he almost has convinced me that the two articles mentioned above could very easily tie in together.

This man talked about the deer with the nice big racks that you get in Canada. I talked about the four deer our hunting party got that November, 1954 in the Town of Thermond, Wolf Point area, in Warren County. The four deer all had nice racks, but two of them were outstandingly beautiful eight-pointers (the rugged heavy type).

He said the reason why Canadian deer have larger racks is because the wolves in Canada chase the deer that would normally stay together in one area over into another herd of deer in a different area, thus causing better inter-breeding which results in bigger, better bucks.

At that point in his story, I told him about the Adirondack coyotes that we knew existed in some quantity where we hunted. My friend then said, "That's the reason why you got such nice deer with big racks."

This year two of my friends and I each got a buck near Kinderhook, in Columbia Co. The buck that I got only weighed 115 lbs. dressed and had a very pretty, well-shaped but not heavy rack. The other two deer both appeared to be older, only a little heavier, and had poor shaped racks. Not big, and one could definitely be classified a freak.

Since the three deer were bagged within a three-mile area or less, it would seem to me that they were deer from the same herd and of different ages. In this area there are hundreds of acres of corn and other grains, also many acres of fine apple orchards. Lack of good food could not contribute to their poor size and poor racks. It would appear to me that inter-breeding in the same herd for years could surely be a factor.

Hewitt M. Shafer, Kinderhook

Fawns in May

Gentlemen: In his book "Adirondack Country," published 1954, Wm. C. White states, page 299, last line, speaking of February, "Young fawns are born—." My information is they are born in May. Surely no doe would be crazy enough to have a fawn in February. Perhaps you should advise Mr. White of this, as if the deer hear of it they may feel they should start polar bear habits. Please inform.

Rev. Harry F. Smith, Mineville

• May is the month, all right. But bears are crazy enough to have their young in February.—Editor

For St. Patrick too

Gentlemen: Sometime ago, I sent some old CONSERVATIONISTS to my brother in Ireland. Since then, every letter he writes he keeps asking for more. Well, when it came to parting with them, I found that they contained a lot of information that I like to refer to and read over once in awhile—which brings me to my questions.

Do you mail subscriptions to foreign countries and if so, how much would a subscription to Ireland be.

Bernard Short, Long Island City

P. S. I wish you would publish your magazine monthly.

• No additional charge for foreign subscriptions.—Editor

Albino porkies

Dear Editor: A picture submitted to December's issue of my favorite magazine by Mr. Beaubriand (of his albino porky) took me back a few years. While bounty trapping in Massachusetts in 1937 I also caught one of these freaks. A few weeks later another was caught by a neighbor. The latter was caught within a half mile of the spot where mine fell victim to the steel trap. Mine now rests in a glass case at the Amherst College Museum.

Incidentally, I brought mine home alive and had him for a month, doing fine living on apples and hemlock when he suddenly died from an infected foot which I thought was healing.

James Bartman, Gardiner

Dear Editor: I see a picture of a beautiful animal reduced to carrion by a thoughtless shot on page 42 of your December-January issue.

How easy to capture a porky alive and put it where it could be viewed and admired, especially when it is such a rarity as the one shown. Any big zoo would be more than pleased to secure a specimen such as the one shown.

Conrad Beaber, Clinton, Ohio

Rifle on Long Island

Dear Sir: I have an over and under gun which consists of a 22 rifle and a 410 shotgun. I live in Hicksville and would like to go rabbit and squirrel hunting in Nassau and Suffolk County, but have failed to do so because of a law that says no one is permitted to carry or fire a 22 rifle on Long Island. I asked the warden and sheriff what I should do, since I can't take my gun apart as you know. One told me he thought if I didn't carry any 22 shells it would be o.k. but he also said if the person wanted to he could give me a summons for carrying a 22 rifle.

Can I go hunting on Long Island with my over and under gun and not receive a summons? Or could you give me another answer to my problems?

Mrs. Dorothy Miller, Hicksville

• You must take the firing pin out of the rifle, or plug the rifle barrel.—Editor

Big buck

Dear Editor: I read in the last issue of your most interesting magazine that you had score sheets to be used in measuring deer antlers. I killed a fine 10-point buck this year with very unusual antlers (I enclose a picture) and am wondering if you would send me information on record heads, method of measuring same, and any other pertinent data.

Stanley F. Frenier, Montpelier, Vt.

• *Score sheet sent.—Editor*

St. Lawrence development

Dear Sir: In the last issue of your splendid magazine on page 39 you show a photo and give an account of a 42½-lb. musky taken by Mr. Anderson in Chautauqua Lake during the season of 1955. It's a nice small fish and somewhat too big for bait here in the St. Lawrence, but I think if you will look at the record you will find that two or maybe three fish taken in these waters during the same year were quite a few pounds larger. And yet Ogdensburg, where there is the finest musky fishing in the country, gets little if any credit.

Has the Conservation Department given any thought to the future when we will have a large lake just below this city, known I believe as Lake St. Lawrence? While many of the big muskies are taken right in front of the city just off the bar, many are caught below the city in the rapids which will be flooded out. Will this change in conditions effect the fishing?

There is a fish hatchery just below this city which has never been used much in the past ten years. As one who is on the local Planning Board I would like to know if your Department has any plans for this equipment. There was some talk some years ago of trying out the raising of musky fry here, but apparently the idea was given up.

Thomas S. Knap, Ogdensburg

• *As to the Department's plans for the development of Lake St. Lawrence, you may be sure that a careful study has already been made of the possibilities which will be created. We published not long ago an article on the proposed Seaway, and a large section of this article was devoted to the prospective effect of the Seaway on fishing facilities. The gist of this particular piece was that most fishing would probably be improved by the creation of the lake.*

As to the hatchery below the city, the Department has extensive plans for enlarging and improving it. Meanwhile, the hatchery continues to produce smallmouth bass and walleyed pike.—Editor.

Sparrow trouble

Dear Editor: I am writing to you in hope that you can assist me in decreasing the number of English sparrows on our farms.

My position is that of corn breeder for the Robson Seed Farms Corporation at Hall, New York. We are breeders and growers of hybrid sweet and field corn. The sparrows have so increased on our farms that prior to and during harvest time they cause tremendous damage to both standing grain and harvested ears. Sweet corn seed ears are harvested while still soft and doughy and are particularly susceptible to sparrow damage.

In addition to spoiling a lot of seed these sparrows fill our buildings in the Winter and plug most of the drain troughs with nests in the Spring. The sparrows are so thick that any attempt to feed the song birds is useless as the sparrows will eat five pounds of grain every day it is put out.

Since these sparrows do concentrate in our barns and around any exposed feeding areas during the Winter months, I have wondered if there is some type of trap one might construct to catch these little pirates. We have no objection to a reasonable number of sparrows around our premises but feel that if we can reduce the breeding stock during the Winter, we might help balance our bird population. Any information you can direct me to will be greatly appreciated.

Robert E. Strosnider, Hall

• *We refer you to the article which treated this subject in our February-March issue of this year. Meanwhile, English sparrows are not protected, and a light shotgun is effective against them.—Editor*

Northern deer season

Dear Editor: Recently a letter to the Editor suggested that the southern open season should be adjusted to include more week ends. I have been a one-man crusade to have the Northern big game season set by weeks instead of arbitrarily using the October 25-November 30 dates. If the 1955 season had been October 22-November 27, you would have had the same number of days open season but would have had five full weeks instead of four full weeks and two broken weeks. Working men have to take their vacation by the week and tend to ignore the broken weeks. In large organizations where many employees strive to get a vacation with a full week's hunting, it creates quite a problem.

The 1956 season could be advanced to October 27 and close December 2 or open October 20 and close November 25; in either case the open season would include the same number of days as is usual, but no broken weeks.

Keep up the good work.

U. G. Hatzenbuhler, New Berlin

New friends and old

Dear Editor: In the October-November issue you were kind enough to publish a letter I wrote you about the Adirondack guide-boat as a part of the "good old days." Naturally it pleased me a great deal to see the letter in such a fine periodical and I am grateful to you for including it.

Since the letter appeared I have had letters from all over the State, some from strangers, some from old friends and acquaintances from way back in the horse-and-buggy and guide-boat and "put-put" days in Saranac Lake. This has been a source of a great deal of fun for me, and so I want to thank you for your courtesy in printing the letter.

Bruce N. Coulter, Bloomfield Hills

The Iron Curtain

Dear Sirs: We are ordering foreign publications on behalf of various Soviet Institutions and Libraries. We would appreciate receiving a sample copy of your journal so that we might bring it to the attention of our clients.

Our address is: V/O "Mezhdunarodnaja kniga", Import Department, Moscow, G-200, USSR.

We thank you for your kind cooperation.

V/O "Mezhdunarodnaja kniga"
Import Department

A New York pelican

Dear Editor: Enclosed is a picture of a white pelican found dead in Pine Lake, N. Y. by Mr. Armand Richelieu, 94 Willow Ave., Schenectady, who has a camp on Pine Lake. The pelican was found September 23, 1955 about 40 feet off shore. Mr. Richelieu brought the pelican ashore and got in touch with me. I looked the bird over carefully and could not see that it had died other than a natural death, or from starvation.

This is the first I have ever heard or seen of one in this part of the country. The Audubon Water Bird Guide gives its range for breeding from Manitoba, Mackenzie, and British Columbia south to North Dakota, Wyoming, Utah and California and on the Texas coast. Winters from Florida, the Gulf Coast, and California south to the Florida Keys and Panama.

M. W. Putnam, Game Protector,
Caroga Lake

Bear trap

Dear Sir: A few issues back someone was speaking of bear traps. Here is a picture of my No. 6, Newhouse. "Gopher Gus" is holding a 36 Marlin carbine. "Herkermer" is holding the chain which is made out of about ⅝ inch steel. The trap is 44 inches long.

Ray P. Lawrence, Southampton

The hours of darkness

Dear Sirs: I recently read a book about wildfowling on the English coast. The author did a great deal of his hunting at night; going to meet the evening flight, and remaining until the early hours of the morning. Why is it that we are not permitted such shooting in America?

Apparently ducks and geese move about quite a bit at this time, and with clouds scudding before the moon, and the marsh crackly with frost, it should be a truly enchanting experience. Also, it would give many a frustrated gunner a few welcome hours afield, after his working day was over. Possibly the above may sound naive, but I have only been hunting a few years, and do not yet have all the answers.

Alden Murphy, New York

• *An enchanting experience, but not for the ducks. They need protection during those hours.—Editor*

Gentlemen: Re your article on page 36 of the December-January, 1955-56 issue on the "deer case."

As I am a real "city man" (though conservation-interested), can you please explain why the use of a light is illegal in deer-hunting.

Arnold B. Joseph, New York

• *Deer are blinded by lights, and will stand rather than run. Thus they are "easy picking" for the hunter who doesn't want his game to have a fair chance. Game, these days, needs a fair chance.—Editor*

Bibliography

Dear Editor: It pains me to accuse such a high-minded public servant as you of base skullduggery; but it appears from the last issue of THE CONSERVATIONIST that you have been bulldozed into pulling chestnuts from the fire for some of my students at State College.

On the desk of your excellent illustrator, Mr. Trimm, you will find a small book called "Workbook for Field Biology," which is used in my course in field biology. Turning to page 63, you will find a long list of books on biology, listed only by author and title. The student is expected to look up these books during the term and note down certain pertinent facts, including publisher, date of publication, degree of difficulty, etc. But alas! All the enterprising student now needs to do is to buy a copy of THE CONSERVATIONIST, clip out a few items, and no less than 23 of his books will be finished without access to the library. Worse yet, I suppose you'll publish most of the rest of them in your next issue.

Seriously, I think this adds another outstanding feature to an already outstanding magazine. And when you get reprints of these articles, I expect to be first in line for them, followed closely by 57 students with workbooks, scissors and glue-pots in hand.

Allen H. Benton,
Department of Biology,
N. Y. S. College for Teachers, Albany

More on European woodcock

Dear Editor: Thank you for your letter of December 30th. Apparently the European variety of woodcock is very rare in this country. It is also true that they vary greatly in size, but not to the extent of the bird that I am writing about. I am not particularly surprised that the Bureau of Game is not too familiar with this bird as I have yet to find anyone, including myself, who knows very much about the habits of woodcock.

However, just for the records, I do know that my father killed one of these sometime during the early part of the century and I saw it many times in his bird collection. Unfortunately, I do not know whether his large collection is still intact or where it might be at the present time. This woodcock was right next to a Richardson owl in his case, and was shot about the same time. This is quite secure in my memory as I shot one, I believe in 1917, which now resides in the Museum of Natural History in New York City. Both birds, incidentally, were mistaken for grouse.

W. N. Macartney, Utica

Au Sable dace

Gentlemen: The West Branch of the Au Sable River between Lake Placid and Wilmington Notch contains a species of minnow which apears to be very abundant. This minnow has a dark color to the back, and is pale yellow in the under sides (flank). What is the technical name of this minnow?

William Hudtwalker, Queens Village

• *From this brief description, either a black-nosed dace or a red-bellied dace.—Editor*

The plugged gull

Dear Editor: In your December-January, 1956 CONSERVATIONIST, I read the piece written by William B. Frasier, Hadley Game Protector, about finding a drowned sea gull in Sacandaga Reservoir with a plug in its beak.

Late in September or early October, I was doing some plug casting from a boat on Canadarago Lake, Richfield Springs, and my plug was taken by a sea gull. He had such a hold on it that I had to cut my line to release him rather than cause further injury to him. He circled and headed northeast.

After reading your article and seeing the picture I wonder if it could have been the same gull?

Lawrence R. Bush, Utica

• *Perhaps. You might write to Protector Frasier and see if he could identify your plug.—Editor*

The life of a fisher

Dear Editor: This past Winter I trapped two male fishers. The carcass of one I forwarded to Bill Hamilton, professor of zoology, at Cornell University. In a separate letter I asked if he could tell me the age of the fisher. It was not long before I received a letter from him giving me some very interesting information concerning the life expectancy of the wild fisher and the weasel tribe in general. I am sure other trappers and naturalists would like to read what the Professor has to say in regards to this subject. The following are his words taken from the letter:

"You pose a hard question about age. Life expectancy of wild animals is *much shorter* than most people suspect. With wild fisher, mink, otter, a 4-5 span is all that we can expect, even though captives may live many years longer. We use fusion of the tips of leg bones, tooth wear, degree of crests on skulls, body measurements and weights to judge, in addition to reproductive organs. In female, can separate young of the year and yearlings from older animals by reproductive organs and whether animal has bred, with characters outlined for males above. Your fisher was probably a two year old—judged by reproductive organ, skull and tooth wear. Probably not older, certainly not younger. These animals mature rapidly. One large male at 18 months I preserved and studied from the Delmar Research Lab. (Conservation Department) was the largest male I've examined insofar as skeletal growth was concerned."

Ed. Reid, Wanakena

Fox in trouble

Dear Editor: Last August while my son and I were hunting woodchucks in southern Ulster County we saw a red fox acting peculiar. It was a very hot day about 3 P.M. (not ideal for 'chucks I know) and as we came over a hill this fox came towards us, panting. At first I thought it was a female luring me away from a den.

I only had a .22 but I killed it. When we examined it we found it was a young male of this year's crop, all covered with dry scales, tail very thin, fur very thin and big sores on his ears.

We carried it back to the barn on some wire and notified the farmer. Neither he nor his help had ever seen a red fox in this condition. I did think of sending the head to Cornell but inasmuch as I was on vacation I had no facilities and did not want to handle the skin any more than necessary. We all agreed the best thing to do was to bury it, which we did and covered it with stones.

Was this a case of rabies? Did we do right?

Theodore Robinson, Flushing

• *This sounds like mange, not rabies, though possibly the animal was afflicted by both.—Editor*

The Great Chain

Dear Sir: Being much interested in iron ore, I would like to inform the readers of your wonderful magazine that in 1778, from the Stirting Iron Works of Peter Townsend at Cold Spring, N. Y. the Great Chain was cast. It was 1,700 feet long; stretched upon a boom from West Point to Constitution Island to stop the British war vessels from coming up the Hudson. It was placed there April 16-30, 1778, and was secured at both ends.

There were also iron chains made from the Salisbury Court Mines and the Melby Furnaces at Millerton, Dutchess County, N. Y. during the Revolutionary War. One of the last ore and iron mines was at Boston Corners, N. Y. which furnished much of the iron for the wheels of the New York, New Haven & Hartford Railroad. I personally knew the last superintendent, a Mr. Perkins, of Salisbury Court. He had worked for the mine for years. I lived at Boston Corners myself at the time and worked for the NYC RR.

Leon C. Baldwin, Fulton

Eagles

Dear Sir: I have spent considerable time (three years) in the southern part of Sullivan County, and during that time I have neither seen nor heard of eagles in that vicinity until this Summer.

While fishing on Yankee Lake, near Wurtsboro, I saw a bald eagle (or eagles, but never more than one at a time) on numerous occasions during the past three months. Again, while I was fishing on the dammed portion of the Mongaup River, just South of Route 17B, another eagle was encountered, but it might have been the bird seen at Yankee Lake since the river at that point is only about 11 miles from the lake.

I could not ascertain whether the eagles were nesting thereabouts, but I think it likely; I first saw one in early June, which, I think, is too early in the year for visitors from the South who come North only after the young have left the nest.

If you can determine whether or not eagles have been known to nest in Sullivan County, I would appreciate your informing me.

John F. Risdell, Brooklyn

• *We have records of bald eagles in Sullivan County, but to date have not been able to locate any definite nesting records there. Perhaps one of our subscribers can supply the necessary information.—Editor*

Cover plants

Gentlemen: Neither I nor my friends can identify the plants on the front cover of the December-January, 1955-56 CONSERVATIONIST.

Enclosed find a three-cent stamp; please advise me at your convenience.

William J. Stone,
Cheyenne, Wyoming

• *Rhododendron and winterberry. We should have made the identification in that issue. Sorry.—Editor*

Pistol

Dear Editor: Would you please let me know if there is any law in the State of New York which forbids you to own a handgun for protection in your home; and also for use on target ranges.

Lawrence Spargimino, Glenwood Landing

• *You must have a permit. Consult your local police.—Editor*

FLAG HUNTERS

The Indians have stopped prodding the deer, with their arrows, in the Adirondacks. Now the true sportsmen armed with bazookas, submachine and 88's take over. If a deer wanders into the line of fire between these battling sportsmen he might get hurt. That is where we come in. If you are going to hurt him do a good job and hurt him in the head, neck, shoulder or heart. Anywhere but in the bread basket or rump. We don't like to clean up meat spattered with deer bread crumbs. If you can't hurt him anywhere but in the rump pull 5" to the right and miss him altogether.

In this case - spare the rump and you won't spoil the little dear.

FULTON FROZEN FOOD

W. 6th and Waldrodt Sts. S. Fifth and Academy Sts.

2-3416 ——— Telephones ——— 2-6429

Flag hunters

Dear Sir: I am enclosing an adv. that we ran for one of our customers which I feel would interest your readers. This merchant and friend of mine is a great hunter and is interested in wildlife.

Leon C. Baldwin, Fulton

Danish trout

Dear Sir: Here's a problem for your panel of experts to muse over. Or perhaps the explanation is so simple that I've been looking too deep for a solution.

I have enclosed the wrapper from a package of quick frozen trout, bearing the note, "Product of Denmark." The package contained two rainbow trout, one of which had a fin tag with the initials NYS CD. I have enclosed the tag. I've thought of a dozen explanations and thrown them out. Maybe you can come up with one that will hold water.

James D. Pelkey, Jr., Rochester

• *Not as much of a mystery as you might suspect. The tag which you enclosed is one which must be applied to all trout imported from Denmark for restaurant purposes in this State. Such tags are shipped to Denmark, attached to the fish in that country, and then appear as you found them.—Editor*

Salmon hatcheries

Dear Sir: Are there any State (or U.S. Fish and Wildlife) fish hatcheries in New York State where Atlantic salmon (or landlocked salmon) are hatched? I think that the answer is probably in the negative, but I'd like to make sure.

My understanding is that the Fish and Wildlife Hatchery at East Orland, Maine is the only place where salmon are regularly hatched in the U. S. I understand that sometimes the hatchery at St. Johnsbury hatches some salmon too—but not every year.

Robert M. McClung, Harrison

• *We have two hatcheries here in New York State which handle Atlantic salmon. Most of the hatching is done in our plant at Warrensburg in Warren County, while most of the rearing is done in our Cambridge hatchery in Washington County.—Editor*

Hummingbird moth

Dear Sir: No. 1. We have a bungalow at Big Pond, near Lew Beach, Delaware Co., known as Mountain Lake on the State map. Every year there are many humming birds that come to feed on the phlox and other flowers. Last year in the middle of August, came some very small ones—¼ the usual size and their bodies no bigger than a bumblebee. Were these a different species, or just verv little ones?

Dr. Karl A. Parshall, Brooklyn

• *Probably the humming bird moth—not a bird at all, but a moth resembling a humming bird and having pretty much the same appearance, flight characteristics and feeding habits.—Editor*

Credits

First cover, Eric Hans Krause; 2d cover, Winslow Homer; pages 4, 5, P. W. Fosburgh, Nick Drahos; 6, 7, Earl McGuirk, Drahos, Jos. Dell; 8, 16, 26, 27, 35, Roy Irving; 10, 11, 33, 34, Drahos; 12, 13, H. Wayne Trimm, Greenleaf Chase; 14, 15, Platnick's Photo Service; 17, Louis Agassiz Fuertes; 18, 24, 25, 32, Trimm; 19, N. Y. S. Museum; 20, 21, Museum, Doug. Finch; 28, Elmer Phillips; 29, Ellen Edmonson, State Coll. Agri.; 38, Tony Nero, F. Fohrman; 3d cover, Clayt Seagears; 4th cover, John James Audubon.

The Inside On The Outdoors Series

Trout and Trouting History Highlights

ONE Spring day, four canoeists were camped at a remote, wild spot on an Adirondack river. They were waiting for the dropping sun to pull a shade over the tail end of the pool. Then the heavier trout would begin to leave their deep day-dens to take evening feeding positions. Rods were already set up.

"I wonder," one said, "how long ago brown trout were first stocked. Do you know, Whitey?"

Now Whitey was a pro fish guy. And he was one of those birds who always had to look up the 'phone numbers he commonly called. But he could remember everything he ever read, or heard, or discovered, about fish. Whitey said it was 1884 in Monroe County.

"In February, 1883," he said, "a German named Von Behr shipped 80,000 brown trout eggs to our Cold Spring Harbor Hatchery, just built on Long Island. They were the first browns in America. Some of the eggs went out to Seth Green, head of the Caledonia Hatchery. He hatched 'em and next year some young fish escaped into the creek running through there. That was it, they say."

He was asked if those early browns were the first non-resident trout stocked in New York.

"Nope," Whitey answered. "The New York Fish Commission was created in 1868 and Seth Green was one of the three guys on it. In 1870, the Caledonia Hatchery was built, first in the State. Three years later the first importations arrived—rainbow trout eggs from California. The eggs were all different sizes. Some were what they called mountain trout and some were from sea-run rainbows they called steelheads and some were from what the Indians called Noshees. Anyway, Green hatched most of the whole mess and those fry were the first of our rainbows."

"How about these early browns. Did they all come from Germany?"

"Nope. Soon after that first shipment by Von Behr and others by another German named Von dem Borne, an Englishman (Marston—editor of the *London Fishing Gazette*) sent over some trout eggs from Loch Leven in Scotland. Seth Green got some of those Loch Leven eggs and the fry got all mixed up with the German trout fry, which were probably about the same kind of fish anyway."

"Whitey, why is it that the brook trout (native) are smaller than the browns and there's not so many of them?"

"Well, there's lotsa reasons. One is that the browns have plenty more time to grow up. They live twelve years or so — three times longer than brook trout."

"You mean to say a brook trout only lives four years?"

"Yup," Whitey said. "Sometimes they get to be five but not often."

"How old do the rainbows and lake trout get?"

"Rainbows about the same as browns, I guess. Lakers are known to live 17 years and more. Hand me the jug."

"Did the State ever stock any other kind of trout?"

"Oh, gosh yes. In 1896, they imported a bunch of Swiss lake trout (which resembled salmon) from Lake Geneva and put 'em in Lake George and a few ponds. They tried so-called Lake Tahoe or red-throat trout from the Sierras the same year and the European saibling a few years before that. Then later they stocked some Sunapee or golden trout. For years they stocked what they called black-spotted trout. There's a photo of one in our 1911 Annual Report—a big one from the Boquet near Elizabethtown. But it looks like an old chisel-jawed brown to me. You've heard all the commotion about the splake—that brook and lake trout hybrid? Well Seth Green reared eight generations of that cross and stocked 'em before he died in 1888. He even brought in, and hatched for the first time ever, a big lot of grayling eggs."

"How about salmon?"

"Oh brother! Atlantic salmon fry were dumped in the upper Hudson seventy years ago. Disappeared. Now, of course, we grow plenty and they're pretty darned well established lotsa places. They tried the big Pacific King Salmon and other western ones. Only western kind did any good were the Red or Sockeye Salmon which we started only four years ago. Now doing swell, I guess, in the hatcheries and a half-dozen spots. And *are* they handsome! It was about 1888 that they got. . . ." He was interrupted. The jug passed.

"Well, you guys asked for it. But there *is* a lot of history to this early fish stuff oughta be spread around."

"Agreed. And it's not all just fish, either, Whitey. Now you take that little Payne rod of mine. Did you know that a trio of those top old-time wizards with the split bamboo all operated out of eastern Orange County, beginning in 1898 and before—and they included Leonard, Thomas and Payne, themselves, in person, no less. Jim Payne carries on the rod business, still at Highland Mills, but William Mills, in New York, took over the Leonard and still makes it. I think the Thomas is still made, too, but I forget by whom."

Whitey said, "Know anything about trout flies?"

"Some. Got it straight from the horse's mouth—Roy Steenrod—down in Liberty.

"One March day in 1890 a great fisherman named Theodore Gordon walked into the Neversink village post office in Sullivan County and got a letter from Frederic Halford of London. That letter started the whole works because inside were 50 flies experimentally tied by Halford not only to imitate English streamside insects but also to float (previously, anglers used wet flies, fished under the surface).

"Now Gordon had been tying flies experimentally, too. Using the Halford flies as inspiration, he began to tie up some that would float better, mainly because those Sullivan County streams were faster and ripplier than the English chalk streams. Halford's sank.

"In 1898, Gordon originated the famous Gordon tribe of flies and then he also came up with the fan-wing Royal Coachman. That must have been before 1909 because Guy Jenkins of New York had begun to use it with great success by then. In 1914, Steenrod originated his Murray's Favorite and two years later he created his famous Hendrickson. Steenrod, was of course, a young man when Gordon died in 1915. Also he was his great friend, fishing pal and student. And it was to Roy that Gordon gave those 50 Halford flies in the original letter. He still has 'em—relics.

"Dan Cahill of Port Jervis is credited with inventing, in the '90's, the fly I'm using tonight—the Cahill. And did you know that a few years ago, Lee Wulff of Shushan originated that White Wulff (not Wolf) you're using and that George LaBranche of New York came up with the Pink Lady in 1910 that Ed Hewitt. . . ."

A heavy fish slashed at something under the cliff across the river.

"You know," one said, "folks might be interested in all this early fish stuff. What say we put what you guys said down on paper when we get out."

Then they walked to the four canoes.

—CLAYT SEAGEARS

Waiting for the Rise

The Adirondacks

Belted Kingsfisher. ALCEDO ALCYON. Linn. *Male 1.2. Female 3.*